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VOL. XV.

TRANSACTIONS

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OF

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VOL. XV.

FOR THE YEAR 1873.

WITH A LIST OF OFFICERS, FELLOWS, ETC.

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1862 McCLINTOCK, ALFRED H., M.D., late Master of the Lying-in Hospital; 21, Merrion square north, Dublin.

1862 DUNCAN, JAMES MATTHEWS, M.D., A.M., F.R.S. Ed., Lecturer on Midwifery and Diseases of Women and Children, Surgeon's Hall; 30, Charlotte square, Edinburgh.

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1862 HALL, ARCHIBALD, M.D., Professor of Midwifery, University of McGill College, Montreal, Canada.

1871 KEILLER, ALEXANDER, M.D., F.R.S. Ed., Physician to the Royal Maternity Hospital, Lecturer on Midwifery and Diseases of Women and Children at the Surgical Hall, Edinburgh.

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1862 CHANNING, WALTER, M.D., late Professor of Midwifery in the University of Cambridge, 17, Blacon-street, Boston, U.S.

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JANUARY, 1874.

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1872 Chittenden, Charles P. Downey, L.R.C.P. Ed., Assistant-Surgeon R.N., Haslar Hospital, and South Lodge, Lee park, Lee, Blackheath.

1861 Church, William John, F.R.C.S., 22, Circus, Bath.

1859 Claremont, Claude Clarke, Millbrook House, 1, Hampstead road, N.W.

Elected

1861* CLARK, JAMES, M.D., 57, Regent's park road, N.W.

1859 CLARK, JAMES FENN, 18, York terrace, Leamington. *Hon. Loc. Sec.*

1862 CLARKE, JOHN, Lynton, North Devon.

1872 CLARKE, WILLIAM MICHELL, late Surgeon to the British General Hospital; 2, York buildings, Clifton, Bristol.

O.F. CLAY, CHARLES, M.D., late Lecturer on Midwifery and Clinical Medicine in St. Mary's Hospital, Manchester; Andenshaw Lodge, Andenshaw, near Manchester, and 101, Piccadilly, Manchester. *Council*, 1863-65.

O.F. CLAY, JOHN, Professor of Midwifery, Queen's College, Birmingham; Allan House, 138-9, Steelhouse lane, Birmingham. *Council*, 1868-69. *Vice-Pres.* 1872-4.

O.F. CLEVELAND, WILLIAM FREDERICK, M.D., Stuart villa, 199, Maida vale, W. *Council*, 1863-64.

1861 CLOGG, STEPHEN, East Looe, Cornwall.

1865* COATES, CHARLES, M.D., Physician to the Bath Unite General Hospital; 10, Circus, Bath.

1860 COCKELL, EDGAR, Holly lodge, Forest road, Dalston, N.E.

1859 COCKELL, FREDERICK EDGAR, 1, Alma villas, Dalston, N.E.

1861 COLLINGWOOD, WILLIAM.

1873 CONCANON, WILLIAM AUGUSTUS, L.K.Q.C.P. Ireland; Lodway Villa, Pill, Somersetshire.

1866 COOMBS, JAMES, M.D., Bedford.

1864 COOPER, GEORGE HENRY C., M.D., Surgeon to the Holloway and N. Islington Dispensary; Surgeon-Accoucheur to the Royal Maternity Charity; 35, Compton terrace, Islington, N.

1873 COOPER, FRANK W., Leytonstone, Essex.

1861 COOPER, JOHN, M.R.C.P. Ed., Clapham rise, S.W.

1872 COOTE, MICHAEL, M.D., Quebec, Canada (and Grangewood Lodge, Burton-on-Trent).

1865 COPEMAN, EDWARD, M.D., Physician to the Norfolk and Norwich Hospital; Upper King street, The Close, Norwich. *Council*, 1869-71. *Vice-Pres.*, 1873-4. *Hon. Loc. Sec.*

Elected

1866 CORNWALL, JAMES, F.R.C.S., Fairford, Gloucestershire.

1860 CORRY, THOMAS CHARLES STEUART, M.D., L.R.C.P. Ed., Senior Surgeon to the Belfast General Dispensary; 9, Clarendon place, Belfast. *Council,* 1867. *Hon. Loc. Sec.*

1859 CORY, FREDERICK CHARLES, M.D., Portland villa, Buckhurst hill, Essex. *Council,* 1867-69.

1863 COWARD, JOHN W., Christchurch, Canterbury, New Zealand [agents: Messrs. Alfred Hill and Sons, 11, Little Britain]. *Hon. Loc. Sec.*

1869 COX, RICHARD, L.R.C.P. Ed., Theale, near Reading.

1870 CRAIGIE, JOHN, M.D., 2, West Cliff cottages, Lyme Regis, Dorset.

1859 CROFT, J. MCGRIGOR A. T., M.D., M.R.C.P., 15, Abbey road, St. John's Wood, N.W.

1866 CROFT, ROBERT CHARLES, L.R.C.P. Ed., 204, Camden road, N.W.

1861 CROSKERY, HUGH, L.R.C.S. Ireland; Clerk in Holy Orders, Government Medical Officer, Chapelton, Jamaica [agents: Messrs. Burgoyne, Burbidges and Squire, 16, Coleman street, E.C.].

1860 CROSS, RICHARD, M.D., 5, Queen street, Scarborough, Yorkshire.

1869 CROSS, ROBERT SHACKLEFORD, Petersfield, Hants.

1867 CROUCHER, HENRY, West Hill, Dartford, Kent.

1859 CULPEPER, WILLIAM MOE, 1, Brunswick terrace, Palace gardens, Kensington, W.

1862 CUMBERBATCH, LAURENCE TRENT, M.D., 25, Cadogan place, Belgrave square, S.W. *Council,* 1868-70.

1867 CUOLAHAN, HUGH, M.D., 9, Grange road, Bermondsey, S.E.

1859 CURGENVEN, J. BRENDON, 11, Craven hill gardens, Bayswater, W. *Council,* 1870-72.

1868 DALY, FREDERICK HENRY, M.D., 101, Queen's road, Dalston, N.E.

1870 DANIEL, WILLIAM ABBOT, Kingston-on-Thames.

Elected

O.F. DAVIS, JOHN HALL, M.D., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery and Diseases of Women and Children at, the Middlesex Hospital; Physician to the Royal Maternity Charity; Consulting Physician-Accoucheur to the St. Pancras Infirmary; 24, Harley street, Cavendish square, W. *Council*, 1859, 1864-65, 1869-74. *Vice-Pres.* 1861-63. *Pres.* 1867-68.

1863 DAVIS, ROBERT ALEX., M.D., L.R.C.P. Ed. (exam.), Resident Physician, County Asylum, Burntwood, near Lichfield, Stafford.

1873 DAVISON, FRANCIS, L.R.C.P. Ed., Russel street, Armagh.

1859 DAY, WILLIAM HENRY, M.D., Physician to the Samaritan Free Hospital for Women and Children; 10, Manchester square, W. *Council*, 1873-74.

1861 DE LA MOTTE, HENRY D. C., Swanage, Dorset.

1869 DEMPSEY, JOSEPH MALDON, M.D., 27, Charterhouse square, E.C.

1872 DENTON, GEORGE BAGSTER, Surgeon to the Ladies' Charity and Lying-in Hospital; 2, Abercromby square, Liverpool.

1873 DESMOND, LORENZO E., M.D., 44, Irvine street, Edge-hill, Liverpool.

1860 DICKENSON, JOHN, F.R.C.S., Hon. Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire.

1859 DICKSON, JOSEPH, M.D., South View, Jersey.

1859 DIXON, JOHN, M.D., 108, Grange road, Bermondsey, S.E.

O.F. DRAGE, CHARLES, M.D., Hatfield, Herts. *Council*, 1861-4.

O.F. DRUITT, ROBERT, M.R.C.P. *Council*, 1859-60. *Vice-Pres.* 1862-64.

1859 DRUITT, WILLIAM, F.R.C.S., Wimborne, Dorset.

O.F. DUNCAN, JAMES, M.B., 8, Henrietta street, Covent garden, W.C. *Council*, 1873-74.

1859 DUNCAN, PETER CHARLES, M.D., 32, New Cross road, Hatcham, S.E.

O.F. DUNN, ROBERT, F.R.C.S., 31, Norfolk street, Strand, W.C. *Council*, 1860. *Vice-Pres.* 1861-62.

Elected

1871 EASTES, GEORGE, M.B., F.R.C.S., Surgeon-Accoucheur to the Western General Dispensary; 5, Albion place, Hyde park square, W.

1866 EASTON, JOHN, M.D., 19, Norfolk Crescent, Hyde park, W.

1867 EDIS, ARTHUR W., M.D., Assistant-Physician to the Hospital for Women, Soho Square; Physician to the British Lying-in Hospital; 23, Sackville street, W. *Council*, 1873-74.

1862 ELLIS, EDWARD, M.D., Physician to the Victoria Hospital for Children.

1861 ELLIS, ROBERT, Obstetric Surgeon to the Chelsea, Brompton, and Belgrave Dispensary; 63, Sloane street, S.W. *Council*, 1868-70.

1862 ELLISON, JAMES, M.D., Surgeon to H.M.'s Household, Windsor; 14, High street, Windsor, Berks. *Council*, 1873-74.

1873 ENGELMANN, GEORGE JULIUS, A.M., M.D., 3003, Locust street, St. Louis, Missouri, U.S.

1871 EVANS, THOMAS WALTER, 101, Heyworth street, Everton, Liverpool.

1865 FAIRBANK, THOMAS, M.D., Surgeon to H.M. the Queen and the Royal Household, Windsor Castle; Moulsey House, Sheet street, Windsor, Berks.

1859 FAIRCLOTH, RICHARD, F.R.C.S., Newmarket, Cambridgeshire.

1867 FAIRLAND, EDWIN JAMES, L.R.C.P. Ed., Staff Assistant-Surgeon, 21st Hussars, Lucknow, Oude [*per* Horace E. Golding, Esq., 1, Frederick's place, Old Jewry].

1869 FARQUHAR, WILLIAM, M.D., Surgeon-Major, Madras Army, Bangalore, Madras Presidency. [24, Pembroke gardens, Kensington.]

1861 FARR, GEO. F., L.R.C.P. Ed., 20, West square, Southwark, S.E.

1868 FEGAN, RICHARD, M.D., 1, Charlton park terrace, Old Charlton, Kent

Elected

1872 FERGUSSON, ALEXANDER, F.R.C.S. Ed., Briarbank, Peebles, N.B.

O.F. FERGUSSON, SIR WILLIAM, Bart., F.R.C.S., F.R.S., Sergeant-Surgeon to H.M. the Queen, Professor of Surgery in King's College and Surgeon to King's College Hospital, Consulting Surgeon to the Samaritan Free Hospital; 16, George street, Hanover square, W. *Vice-Pres.* 1862-63.

1869 FERGUSSON, WILLIAM EDWARD LAING, M.D., 45, Claremont square, Pentonville, N.

1872 FERNIE, HENRY MORTLOCK, Park green, Macclesfield, Cheshire.

1861 FETHERSTON, GERALD H., M.D., L.R.C.P. Ed.; Hon. Physician to the Melbourne Lying-in Hospital, Prahran, Melbourne, Victoria. *Hon. Loc. Sec.*

1872 FIELD, ALBERT FREDERICK, Milestone house, Blackwater, Hants.

1873 FIELD, GEORGE PURDEY, M.R.C.S., 43, Sussex gardens, Hyde park, W.

1873 FINEGAN, JAMES HERBERT, M.D., 72, Rodney street, Liverpool.

1860 FISHER, C. HOLDRICH, M.D., Sittingbourne, Kent.

1870 FISHER, JOHN MOORE, M.D., 57, Great Thornton street, Hull, Yorkshire.

1873 FITCH, SIMON, M.A., M.D., Portland, Maine, U.S.

1868 FLETCHER, EDWARD, Lygon street, Carlton, Melbourne, Victoria.

1865 FOWLER, JAMES, F.S.A., Hon. Surgeon to the Clayton Hospital and Wakefield General Dispensary; 13, South Parade, Wakefield. *Council*, 1872-4. *Hon. Loc. Sec.*

1866 FOX, CORNELIUS BENJAMIN, M.D., Penquite lodge, South Cliff, Scarborough.

1872 FOX, EDWARD CHARLTON, M.D., Bloomsbury, Birmingham.

1862 FRAIN, JOSEPH, M.D., Hon. Surgeon to the South Shields Dispensary; Frederick street, South Shields.

1861 FRANKLAND, THOMAS THRUSH, Surgeon to the Ripon Dispensary, North House, Ripon, Yorkshire.

Elected

1867 FREEMAN, HENRY W., 24, Circus, Bath.

1867 FRYER, CHARLES, L.K.Q.C.P. Ireland; Richmond place, Higher Openshaw, Manchester.

1867 FULLER, CHARLES C., 29, Albany street, Regent's park, N.W.

1863 GALTON, JOHN H., M.D., Three Oak villa, Thicket road, Anerley, S.E. *Council*, 1874.

1872 GARDNER, W., M.A., M.D., 470, St. Joseph street, Montreal.

1863 GARMAN, HENRY VINCENT, Kent House, Bow road, E.

1873 GARTON, WILLIAM, Radcliffe Library Museum, Oxford.

1859 GASKOIN, GEORGE, 7, Westbourne park, W. *Council*, 1870-72.

1869 GEIKIE, WALTER B., M.D., F.R.C.S. Ed., Professor of the Principles and Practice of Medicine in the University of Trinity College, Toronto, Ontario, Canada.

1859 GERVIS, HENRY, M.D., Assistant Obstetric Physician to, and Lecturer upon Forensic Medicine at, St. Thomas's Hospital; Consulting Physician to the Deaf and Dumb Asylum, and to the Asylum for Fatherless Children; 13, St. Thomas's street, Southwark, S.E. *Council*, 1864-66. *Hon. Sec.* 1867-70. *Vice-Pres.* 1871-3.

1866 GERVIS, FREDERICK HEUDEBOURCK, 1, Fellowes road, Hampstead, N.W.

1866 GIDDINGS, WILLIAM KITTO, L.R.C.P. Ed., Shaftesbury House, Calverley, near Leeds, Yorkshire.

1860 GILL, SAMUEL LAWRENCE, L.R.C.P. Ed., 4, Campbell terrace, Bow road, E.

1869 GILL, WILLIAM, 43, Woburn place, Russell square, W.C.

1867 GITTINS, JOHN, L.R.C.P. Ed., St. Olave's Union, Parish street, Southwark, 134, Tooley street, S.E.

1871 GODDARD, EUGENE, L.R.C.P. Lond., 27, Pentonville road, N.

1869 GODDEN, JOSEPH, L.K.Q.C.P. Ireland; 6, Lancaster terrace, Eastbourne.

1871 GODSON, CLEMENT, M.B. and C.M., Physician to the Samaritan Free Hospital; 8, Upper Brook street, Grosvenor square, W.

Elected

1868 GODWIN, ASHTON, M.D., 28, Brompton crescent, Brompton, S.W.

1873 GOLDSMITH, JOHN, M.D., Highworth House, Worthing, Sussex.

1873 GOODCHILD, NATHANIEL, L.R.C.P. Ed., 79, Kentish Town road, N.W.

1872 GORNALL, JOHN HANKINSON, Surgeon to the Warrington Dispensary; Beech House, Winwick street, Warrington.

1861 GOSS, SAMUEL DAY, M.D., F.R.G.S., 111, Kennington park road, S.E. *Council*, 1871-3.

1869 GOSS, TREGENNA BIDDULPH, 31, The Paragon, Bath.

1873 GRAY, ROBERT, L.K.Q.C.P. Ireland, Russell street, Armagh, Ireland.

1861 GREAM, GEORGE THOMPSON, M.D., F.R.C.P., Physician-Accoucheur to H.R.H. the Princess of Wales; 2, Upper Brook street, Grosvenor square, W. *Council*, 1862-63. *Vice-Pres.* 1864-66.

1863 GRIFFITH, G. DE GORREQUER, Physician to the Hospital for Women and Children, Pimlico; Physician-Accoucheur to St. Saviour's Maternity; 9, Lupus street, St. George's square, S.W.

1869 GRIFFITH, JOHN T., M.D., Talfourd House, Camberwell.

1859 GRIFFITH, THOMAS TAYLOR, F.R.C.S., Consulting Surgeon to the Wrexham Infirmary; Wrexham, Denbighshire. *Council*, 1870-72.

1870 GRIGG, WILLIAM CHAPMAN, M.D., Physician to Queen Charlotte's Lying-in Hospital; 6, Curzon street, May fair.

O.F. GRIMSDALE, THOS. F., L.R.C.P. Ed., Consulting Surgeon to the Lying-in Hospital, and late Lecturer on Diseases of Children, &c., at the Royal Infirmary School of Medicine; 29, Rodney street, Liverpool. *Council*, 1861-62.

1870 GROSS, REUBEN, M.D. [care of Messrs. J. and A. Macmillan], St. John's, New Brunswick, Canada.

Elected

1865 GWYN, GEORGE F., Westcroft House, Hammersmith, W.

1867 HADAWAY, JAMES, L.R.C.P. Ed., 47B, Welbeck street, Cavendish square, W.

O.F. HADEN, FRANCIS SEYMOUR, F.R.C.S., 62, Sloane street, S.W. *Council*, 1861-63, 1868-70. *Vice-Pres.* 1865-67.

O.F. HALL, ALFRED, M.D., Senior Physician to the Brighton Dispensary; 30, Old Steyne, Brighton. *Council*, 1864-65. *Vice-Pres.* 1866-68. *Hon. Loc. Sec.*

1859 HALL, FREDERICK, 1, Jermyn street, St. James's, S.W.

1867 HALL, JOHN HENRY WYNNE, L.R.C.P. Ed., 118, Wandsworth road, S.W.

1862 HALL, WILLIAM, Lecturer on Physiology and Diseases of Women and Children, Leeds School of Medicine; Hillary place, Leeds. *Hon. Loc. Sec.*

1871 HALLOWES, FREDERICK B., Redhill, Reigate, Surrey.

1860 HARDEY, KEY, Surgeon to the West City Dispensary; 4 Wardrobe place, Doctors' Commons, E.C.

1869 HARDINGE, HENRY, M.D., Physician to the Great Northern Hospital; 18, Grafton street, Bond street, W.

1872 HARDYNG, WILLIAM, F.R.C.S., 4, Percy street, Bedford square, W.C.

O.F. HARPER, PHILIP H., F.R.C.S., 30, Cambridge street, Hyde park, W.

O.F. HARRINSON, ISAAC, F.R.C.S., Castle street, Reading, Berks. *Council*, 1862-65. *Hon. Loc. Sec.*

1862 HARRIS, CHARLES, M.D., Northiam, Ashford, Kent.

1871 HARRIS, CHARLES JAMES, 54, Broad street, Golden square, W.

1872 HARRIS, HENRY, M.D., F.R.C.S., Trengweath place, Redruth, Cornwall.

1861 HARRIS, HERBERT ROBEY, 52, Bolton street, Bury, Lancashire.

Elected

1867 HARRIS, WILLIAM H., M.D., Professor of Midwifery in the Madras Medical College, and Superintendent of the Lying-in Hospital, Madras [agent: Mr. H. K. Lewis, Gower street].

1861 HARRIS, WILLIAM JOHN, 13, Marine Parade, Worthing.

1865 HARVEY, ROBERT, M.D., Civil Surgeon of Bhurtpore, near Agra, India [*viâ* Bombay]. [Per Alex. Harvey, M.D., 228, Union street, Aberdeen.]

1873 HATHERLY, HENRY REGINALD, L.R.C.P. Ed., Wellington street, Park side, Nottingham.

1868 HAY, THOMAS BELL, L.R.C.P. Ed.; 43, Caledonian road, N.

1865 HAYES, HAWKESLEY ROCHE, Basingstoke, Hants.

1873 HAYES, THOMAS CRAWFORD, Assistant Obstetric Physician to King's College Hospital; 60, Wimpole street, Cavendish square, W.

1862 HAYMAN, CHARLES CHRISTOPHER, M.D., 22, Grand Parade, Eastbourne, Sussex.

1864 HEAD, EDWARD, M.B., Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital; 91, Harley street, W. *Council*, 1870-71.

1867 HEMBROUGH, JOHN WILLIAM, Ivy cottage, Waltham, Grimsby.

1869 HEMSTED, HENRY, Whitchurch, Hants.

1870 HENDERSON, ALEXANDER, 2, Meadow Bank place, Rose vale, Partick, Glasgow.

1860 HESS, AUGUSTUS, M.D., Physician to the Jews' Hospital, Norwood; 14, Artillery place, Finsbury square, E.C.

O.F. HEWITT, GRAILY, M.D., F.R.C.P., Professor of Midwifery in University College, London, and Obstetric Physician to University College Hospital; 36, Berkeley square, W. *Hon. Sec.* 1859-64. *Treas.* 1865-66. *Vice-Pres.* 1867-68. *Pres.* 1869-70. *Council*, 1871-74.

1862 HEWITT, TOM SMITH, M.D., Ivy Cottage, Winkfield, Windsor, Berks.

1867 HICKINBOTHAM, JAMES, L.R.C.P. Ed., 10, Park road, Nechells, Birmingham.

Elected

1860 HICKS, JOHN BRAXTON, M.D., F.R.C.P., F.R.S., Physician-Accoucheur to, and one of the Lecturers on Midwifery and the Diseases of Women and Children at, Guy's Hospital; Physician to the Royal Maternity Charity; 24, George street, Hanover square. *Council*, 1861-2, 1869, 1873-74. *Hon. Sec.* 1863-65. *Vice-Pres.* 1866-68. *Treas.* 1870. *Pres.* 1871-2.

1860 HIGGS, THOMAS FREDERIC, L.R.C.P. Ed., 194, High street, Dudley, Worcestershire.

1872 HILLIARD, ROBERT HANCY, M.D., 5, Belgrave terrace, Upper Holloway, N.

1868 HIME, THOMAS WHITESIDE, M.B., 217, Glossop road, Sheffield.

1865 HODDER, EDWARD M., M.D., Lecturer on Obstetrics, Toronto School of Medicine; Toronto, Canada West. *Hon. Loc. Sec.*

O.F. HODGES, RICHARD, M.D., F.R.C.S., 103, Gloucester place, Portman square, W.

1864 HOFFMEISTER, WILLIAM CARTER, M.D., Surgeon to the Queen in the Isle of Wight; Clifton House, Cowes, Isle of Wight.

1871 HOGG, FRANCIS ROBERTS, M.D., India.

1859 HOLMAN, CONSTANTINE, M.D., Reigate, Surrey. *Council*, 1867-69. *Vice-Pres.* 1870-71.

1860 HOLMAN, HENRY MARTIN, M.D., Hurstpierpoint, Sussex.

1864 HOOD, WHARTON PETER, M.D., 65, Upper Berkeley street, Portman square, W.

1872 HOPE, WILLIAM, M.D., Physician to Queen Charlotte's Lying-in Hospital, Obstetric Assistant to St. Bartholomew's Hospital; 5, Bolton row, Mayfair, W.

1866 HORNIBLOW, RICHARD E. BRAIN, M.D., 24, Lansdowne place, Leamington.

1861 HORTON, GEORGE EDWARD, Castle street, Dudley, Worcestershire.

1864 HOUGHTON, HENRY GEORGE, L.K.Q.C.P. Ireland; 6, Mount street, Grosvenor square, W.

Elected

1859 HUTCHINSON, JONATHAN, F.R.C.S., Surgeon to the London Hospital; 4, Finsbury circus, E.C. *Council*, 1869-71.

1870 HUTHWAITE, CHARLES, L.R.C.P. Ed., Stratford square, Nottingham.

1861 HUTTON, CHARLES, M.D., Physician to the General Lying-in Hospital; 26, Lowndes street, Belgrave square, S.W.

1859 ILOTT, JAMES WILLIAM, Bromley, Kent.

1859 IMAGE, WILLIAM EDMUND, F.R.C.S., Senior Surgeon to the Suffolk General Hospital; Bury St. Edmund's, Suffolk. *Council*, 1870-72.

1870 IZOD, FREEMAN, Fletcher House, Tottenham, Middlesex.

1864 JACKSON, EDWARD, M.B., Surgeon to the Sheffield Hospital for Women; Fern Bank, Glossop road, Sheffield. *Hon. Loc. Sec.*

1864 JACKSON, ROBERT, M.D., 53, Notting hill square, W.

1873 JAKINS, WILLIAM VOSPER, L.R.C.P. Ed., Sturt street, Ballarat, Victoria. [Per Isaac N. Jakins, Esq., 32, Osnaburgh street].

1872 JALLAND, ROBERT, Horncastle, Lincolnshire.

1868 JAMES, ALFRED, M.D., Perry vale, Forest hill, S.E.

1872 JAMES, EDWIN MATTHEWS, Surgeon to the Melbourne Hospital, Victoria; 169, Collins street east, Melbourne.

1859 JAMES, HENRY, F.R.C.S., Elmhurst, Weybridge, Surrey. *Council*, 1862-63.

1862 JAY, FREDERICK FITZHERBERT, 12, St. Nicholas Cliff, Scarboro', Yorkshire.

1863 JENKINS, ROBERT W., 13, Charlotte street, Bedford square, W.C.

1859 JENNINGS, JOSEPH C. S., Abbey House, Malmesbury, Wilts.

1860 JEPSON, HENRY, F.R.C.S., Surgeon to the Kingston Dispensary; Hampton, Middlesex, S.W.

1861 JONES, EDWARD, M.D., 48, Sydenham Park, Kent.

Elected

1868 JONES, EVAN, Ty-Mawr, Aberdare, Glamorganshire.

1859 JONES, GEORGE, 12, New Hall street, Birmingham.

1868 JONES, JOHN, 60, King street, Regent street, W.

1873 JONES, PHILIP W., Baker street, Enfield, Essex.

1866 JONES, ROBERT, 19, Stretford road, Hulme, Manchester.

1873 JONES, T. EYTON, Surgeon to the Denbigh Infirmary; The Priory, Wrexham.

1870 JONES, WILLIAM, Oak villa, Glynneath, Neath, Glamorganshire.

1868 JORDAN, WILLIAM ROSS, Surgeon to the Birmingham Hospital for Women; Manor House, Moseley, near Birmingham.

1867 JUNKER, F. ETHELBERT, M.D.

O.F. KEELE, GEORGE THOMAS, 81, St. Paul's road, Highbury, N.

1872 KENNEDY, JOHN EDWARD, M.B., Lecturer on Medical Jurisprudence, Trinity College, Toronto; 242, Richmond street, West Toronto, Canada.

1865* KERNOT, GEORGE CHARLES, M.D., 3, Chrisp street, Poplar, E.

1872 KERR, NORMAN S., M.D., Markyate street, near Dunstable, Beds.

O.F. KIALLMARK, HENRY WALTER, 66, Prince's square, Westbourne grove, W.

1869 KINGSFORD, C. DUDLEY, M.D., Upper Clapton, N.E.

1860 KINGSFORD, EDWARD, F.R.C.S., Surgeon to the Sunbury Dispensary; Sunbury, Middlesex.

1862 KIRKPATRICK, JOHN RUTHERFORD, M.B. Dubl., Examiner in Midwifery, Royal College of Surgeons, Ireland; 4, Upper Merrion street, Dublin. *Council*, 1872-4.

1872* KISCH, ALBERT, 2, Circus place, Finsbury, E.C.

1867 KNAGGS, HENRY GUARD, M.D., 72, Kentish Town road, N.W.

1872 KONRÁD, MARK, M.D., The Vienna Hospital, Vienna, Austria.

1867 LANGFORD, CHARLES P., 187, Goswell road, E.C.

Elected

O.F. LANGMORE, JOHN CHARLES, M.B., F.R.C.S., 20, Oxford terrace, Hyde park, W. *Council*, 1861-64. *Vice-Pres.* 1869-71.

1866 LANGSTON, THOMAS, L.R.C.P. Ed., 29, Broadway, Westminster, S.W.

1862 LANPHIER, RICHARD, M.B. Dubl., Alford, Lincolnshire.

1872 LATTEY, JAMES, 26, Upper Phillimore place, Kensington, W.

1873 LAWTON, HERBERT A., The Royal Infirmary, Liverpool.

1867 LEAF, WALTER, Surgeon to the St. Marylebone General Dispensary; 14, Furnival's Inn, Holborn, E.C.

1859 LEECH, EDWARD, Pallant, Chichester, Sussex.

1860 LEISHMAN, WILLIAM, M.D., Physician to the University Lying-in Hospital, Regius Professor of Midwifery in the University of Glasgow; 156, Bath street, Glasgow. *Council*, 1866-68. *Vice-Pres.* 1869-70.

1872 LEONARD, CROSBY, Surgeon to the Bristol Royal Infirmary; Rockleigh House, White Ladies road, Clifton, Bristol.

1868 LESLIE, WILLIAM BURNUP, M.D., Stonehaven, Kincardineshire.

1870 LIGERTWOOD, JOHN, M.D., late Assistant-Surgeon, R.N., China Expedition; Methlick, Aberdeenshire.

1873 LINDSAY, W. B., M.D., Strathroy, Ontario, Canada.

1868 LLEWELLYN, EVAN, L.R.C.P. Ed., 9, Mount place, London Hospital, E.

1872* LOCK, JOHN GRIFFITH, M.A., Lansdowne House, Tenby.

O.F. LOCOCK, SIR CHAS., Bart., M.D., F.R.C.P., 26, Hertford street, Mayfair, W. *Honorary President.*

1859 LOMBE, THOMAS ROBERT, M.D., Bemerton, Torquay.

1870 LONG, MARK, M.D., Surgeon to the Poplar Hospital; 93, Richmond road, Dalston, N.E.

1866 LOVEGROVE, CHARLES, M.D., 18, Westbourne place, Eaton square, S.W.

1872 LOVEGROVE, JAMES F., Ightham, Sevenoaks, Kent.

Elected

1862 LOWE, GEORGE, F.R.C.S., Burton-on-Trent, Staffordshire.

1869 LOWNDES, FREDERICK WALTER, 62, Mount Pleasant, Liverpool.

1866 LUCEY, WILLIAM CUBITT, M.D., Norfolk villas, Junction road, Upper Holloway, N.

1873 LUSH, WILLIAM JOHN HENRY, M.R.C.S., L.R.C.P., Fyfield House, Andover.

1869 LYDALL, WYKEHAM H., L.R.C.P. Ed., 19, Mecklenburgh square, W.C.

1868 LYNCH, J. ROCHE, 41, Chepstow villas, Westbourne grove.

1871 MCBEATH, WILLIAM, M.D., Witham, Alford, Lincolnshire.

1871 MCCALLUM, DUNCAN CAMPBELL, M.D., Professor of Midwifery and Diseases of Women and Children, McGill University; Physician to the University Lying-in Hospital; and Physician to the Montreal General Hospital; Montreal, Canada.

1871 M'CONKEY, THOMAS CLARKSON, M.D., McGill Univ., M.R.C.S.E; Barrie, Ontario, Canada.

1873 MACDONALD, JOHN ALEXANDER, M.D., Woburn, Beds.

O.F. MACKINDER, DRAPER, M.D., Consulting-Surgeon to the Gainsborough Dispensary; Gainsborough, Lincolnshire. *Council*, 1871-3.

1872 MCMONAGLE, JOSEPH, M.D., New Brunswick, Dominion of Canada.

1872 MACMORDIE, WILLIAM KIRKPATRICK, M.D., 1 College square east, Belfast.

1861 MCVEAGH, DENNIS, L.K.Q.C.P. Ireland, 33, Bishop street, Coventry, Warwickshire.

1866 MADDEVER, JOHN COOMBE, M.D., 19, Battery place, Rothesay.

1859 MADGE, HENRY M., M.D., 32, Fitzroy square, W. *Council*, 1863-65. *Vice-Pres.* 1872-4.

1871 MALINS, EDWARD, M.D., Hon. Medical Officer to the Birmingham Lying-in Charity; 8, Old Square, Birmingham.

Elected

1871 MANBY, ALAN REEVE, East Rudham, Brandon, Norfolk.

1868 MARCH, HENRY COLLEY, M.D., 2, West street, Rochdale.

1860 MARLEY, HENRY FREDERICK, Padstow, Cornwall.

1859 MARLEY, RICHARD, Bromyard, near Worcester, Herefordshire.

1869 MARRIOTT, OSBORNE DELANE, M.B., C.M., Sevenoaks, Kent.

1862 MARRIOTT, ROBERT BUCHANAN, Swaffham, Norfolk.

O.F. MARSHALL, JOHN BRAKE, Nightingale road downs, Clapton, N.E.

1871 MARTIN, EDWARD, Senior Surgeon to the Weston-super-Mare Hospital; Victoria House, Weston-super-Mare.

1873 MARTIN, HENRY CHARRINGTON, M B., C.M., Reigate, Surrey, and 11, Radnor place, Hyde park, W.

1864 MARTIN, LAWRENCE J., M.D., Physician to the Melbourne Lying-in Hospital; 126, Collins street east, Melbourne, Victoria.

1871 MATHIAS, DAVID, Pendre, Cardigan, South Wales.

1866 MATTEI, ANTOINE, M.D., Professor of Midwifery, Rue Thérèse 4, Paris.

1861 MATTHEWS, JOHN, M.D., 4, Mylne street, Myddelton square, E.C.

1867 MAY, HENRY, L.R.C.P. Lond., Fairfield House, Lichfield road, Aston, Birmingham.

O.F. MEADOWS, ALFRED, M.D., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital; Physician to the Hospital for Women, Soho square; 27, George street, Hanover square, W. *Council*, 1862-64. *Hon. Sec.* 1865-66. *Hon. Lib.* 1865. *Treas.* 1867-69. *V.P.* 1874.

1872 MENDENHALL, GEORGE, M.D., late Professor of Midwifery and Clinical Midwifery in the Miami Medical College of Cincinnati, and one of the Physicians of the Cincinnati Hospital for Obstetrics and Diseases of Women and Children; Cincinnati, Ohio, U.S.

Elected

1871 MILLER, HUGH, M.D., Assistant-Physician to the Maternity Hospital, Glasgow; 3, Crescent place, Sauchiehall street, Glasgow.

1871 MILLER, JOHN FAURE, 28, Rue de Matignon, Faubourg St. Honoré, Paris. *Hon. Loc. Sec.*

1869 MILWARD, JAMES, 62, Crockherbtown, Cardiff.

1869 MINNS, PEMBROKE R. J. B., M.D., Thetford, Norfolk.

O.F. MITCHELL, JOSEPH THOMAS, F.R.C.S. [8, Percy place], 176, Clapham road, S.W. *Council*, 1863-67.

1867 MITCHELL, ROBERT NATHAL, M.D., 1, Amersham park villas, New Cross, Kent.

1873 MONCKTON, MARSHALL, L.F.P.S. Glasg., Hurstpierpoint, Sussex.

1872 MONDELET, WILLIAM H., M.D., 776, Craig street, Montreal.

1868 MOODELLY, P. S. MOOTOOSAWMY, M.D., Native Surgeon, Uncovenanted Service, Madras, Manargoody, Tanjore.

1871 MOODELLY, CHITTATHORE BANLOO, Graduate in Medicine and Surgery of the Madras Medical College; Officiating Gillah Surgeon, of Cochin; Trichinopoly.

1873 MOON, ROBERT HENRY, F.R.C.S., Fern Lodge, Lower Norwood.

1869 MOORE, JOSEPH, M.D., Counser villa, Balham, S.W.

1859 MOORHEAD, JOHN, M.D., Surgeon to the Weymouth Infirmary and Dispensary; Weymouth, Dorset.

1863 MORGAN, EDWARD, 15, Park street, Llanelly, Caermarthenshire.

1869 MORGAN, W. H., Surgeon 23rd Regiment, Tinilon, Travancore.

1871 MORRISON, JOHN R., L.R.C.P. Ed., 57, Cannon street road, E.

1865 MOSELEY, GEORGE, F.R.C.S., 51, Priory road, Kilburn, N.W.

Elected

O.F. MURRAY, GUSTAVUS CHARLES P., M.D., Obstetric Physician to the Great Northern Hospital; 17, Green street, Grosvenor square, W. *Council*, 1864-65. *Hon. Sec.* 1866-69. *Vice Pres.* 1870-72. *Treas.* 1873-74.

O.F. MUSGRAVE, JOHNSON THOMAS, L.R.C.P. Ed., Irlam villa, 39, Finchley road, N.W. *Council*, 1859-60.

1859 NAPPER, ALBERT, Broad Oak, Cranleigh, Guildford, Surrey. *Council*, 1866-68.

1863 NASON, JOHN JAMES, M.B. Lond., 11, Bridge street, Stratford-on-Avon.

1859 NASON, RICHARD BIRD, Nuneaton, Warwickshire.

1859 NEAL, JAMES, M.D., late Hon. Surgeon to the Lying-in Hospital, Birmingham; Barcelona House, Sandown, Isle of Wight.

1866 NEILD, JAMES EDWARD, M.D., Lecturer on Forensic Medicine, Melbourne University; 166, Collins street east, Melbourne.

1859 NEWMAN, WILLIAM, M.D., Surgeon to the Stamford and Rutland Infirmary; Barn Hill House, Stamford, Northamptonshire. *Council*, 1873-74.

1859 NEWTON, EDWARD, F.R.C.S., 4, Upper Wimpole street, W. *Council*, 1865-67.

1872 NIBLETT, FRANCIS D., L.R.C.P. Ed., The Grove, Hackney, N.

1868 NICHOLLS, JAMES, M.D., Duke street, Chelmsford, Essex.

1861 NICHOLS, GEORGE W., Augusta House, Rotherhithe, S.E.

1873 NICHOLSON, ARTHUR, King's College Hospital.

1869 NORTON, SELBY, M.D., Rye House, Putney hill, Surrey.

1868 OATES, PARKINSON, M.D., 164, Cambridge street, Eccleston square, S.W.

O.F. OLDHAM, HENRY, M.D., F.R.C.P., Consulting Obstetric Physician to Guy's Hospital; 4, Cavendish place, Cavendish square, W. *Vice-Pres.* 1859. *Council*, 1860, 1865-1866, 1868-74. *Treas.* 1861-62. *Pres.* 1863-64.

Elected

1859 OLDHAM, JAMES, F.R.C.S., Consulting-Surgeon to the Brighton Lying-in Institution; 53, Norfolk square, Brighton. *Council*, 1866-68.

1869 ORD, GEORGE RICE, Streatham hill, Surrey.

1863 OSWALD, JAMES WADDELL JEFFRIES, L.R.C.P. Ed., 245, Kennington road, S.E.

1869 OXLEY, MARTIN G. B., L.K.Q.C.P. Ireland, 80, Rodney street, Liverpool.

1859 PALFREY, JAMES, M.D., Obstetric Physician to, and Lecturer on Diseases of Women at, the London Hospital; Obstetric Physician to the General Lying-in Hospital, York road; 29, Brook street, Grosvenor square.

1873 PARKER, ROBERT WILLIAM, Hospital for Sick Children; Great Ormond street.

1873 PARKS, LUTHER, A.M., M.D., Boston, United States. [Agents: Messrs. McCalmont Brothers & Co., Bankers, 15, Philpot lane, E.C.]

1867 PARKS, JOHN, The Wylde, Bury, Lancashire.

1872 PARR, GEORGE, 18, Upper Phillimore place, Kensington, W.

1865* PATERSON, JAMES, M.D., Hayburn Bank, Partick, Glasgow.

1864 PEARSON, DAVID RITCHIE, M.D., 23, Upper Phillimore place, Kensington, W.

1871 PEDLER, GEORGE HENRY, 6, Trevor terrace, Rutland gate, S.W.

O.F. PEIRCE, RICHARD KING, Surgeon to the Notting hill and Shepherd's Bush Dispensary, 16, Norland place, Notting hill, W.

1873 PEREZ, DIEGO, M.D., Montevideo, South America [*per* A. K. Mackinnon, Esq., Belgrave Mansions, Grosvenor gardens, S.W.]

1871 PERRIGO, JAMES, M.D., 591, St. Catherine street, Montreal, Canada.

Elected

1866 PHILLIPS, JOHN J., M.D., Assistant-Obstetric Physician to Guy's Hospital; Assistant-Physician to the Hospital for Sick Children; Physician to the Royal Maternity Charity; 26, Finsbury square, E.C. *Hon. Lib.* 1870. *Hon. Sec.* 1871-4.

1871 PHILPS, PHILIP GEORGE, 4, Queen's road, Peckham, S.E.

1866 PILCHER, WILLIAM JOHN, 43, High street, Boston, Lincolnshire.

1864 PLAYFAIR, W. S., M.D., F.R.C.P., Professor of Obstetric Medicine in King's College, and Obstetric Physician to King's College Hospital; 5, Curzon street, Mayfair, W. *Council*, 1867. *Hon. Librarian*, 1868-9. *Hon. Sec.* 1870-72. *Vice-Pres.*, 1873-4.

O.F.* POLLARD, WILLIAM, Surgeon to the Torbay Hospital; Southlands, Torquay, Devon.

1860 POLLOCK, TIMOTHY, M.D., 26, Hatton Garden, E.C. *Council*, 1866-68.

1864 POTTER, JOHN BAPTISTE, M.D., Assistant-Obstetric Physician to the Westminster Hospital; 20, George street, Hanover square, W. *Council*, 1872-4.

1859 POUND, GEORGE, Odiham, Hants.

1863 POWELL, JOSIAH T., M.D., 347, City road, E.C.

1864 PRICE, WILLIAM NICHOLSON, Lecturer on Midwifery at the Leeds School of Medicine; 7, East parade, Leeds.

1863 PRICE, WILLIAM PRESTON, M.D., Surgeon to the Metropolitan Infirmary for Scrofulous Children, Margate; 1, Ethelbert Crescent, Margate.

O.F. PRIESTLEY, WILLIAM O., M.D., F.R.C.P., Consulting Obstetric Physician to King's College Hospital; and Consulting Physician-Accoucheur to the St. Marylebone Infirmary; 17, Hertford street, Mayfair, W. *Council*, 1859-61, 1865-66. *Vice-Pres.* 1867-69.

Elected

O.F. RADFORD, THOMAS, M.D., Consulting Physician to St. Mary's Hospital, Manchester; Moor field, Higher Broughton, Manchester. *Vice-Pres.* 1859.

1859 RAMSAY, JOHN ALLEN, L.R.C.P. Ed., Great Shelford, Cambridge.

O.F. RANDALL, JOHN, M.D., Lecturer on Medical Jurisprudence, St. Mary's Hospital Medical School; Medical Officer, St. Marylebone Infirmary; 35, Nottingham place, W.

1872 RANKIN, WILLIAM BAILY, Surgeon to Prince Alfred Hospital; High street, St. Kilda, Melbourne.

1860 RANSOM, ROBERT, M.D., F.R.C.S., 5, Jesus lane, Cambridge.

1861 RASCH, ADOLPHUS A. F., M.D., Physician for Diseases of Women to the German Hospital; Physician to the Training Hospital, Tottenham; 7, South street, Finsbury square, E.C. *Council*, 1871-3.

1870 RAY, EDWARD REYNOLDS, Dulwich.

1860* RAYNER, JOHN, M.D., Swaledale House, Quadrant road north, Highbury New Park, N.

1859 RAYNES, HENRY, Gringley-on-the-hill, Bawtry, Yorkshire.

1871 READ, CHARLES, M.B., 1, St. George's square, Regent's park road, N.W.

O.F. REMINGTON, THOMAS, M.D., Visiting Medical Officer to the S. Lambeth and Brixton Dispensary; Grove House, 194, Brixton road, S.W.

1862 RICHARDS, DAVID, 8, St. George's place, Brighton, Sussex.

1859 RICHARDS, SAMUEL, M.D., 36, Bedford square, W.C. *Council*, 1864-66.

1862 RICHARDS, S. SMITH C., 36, Bedford square, W.C.

O.F. RICHARDSON, RICHARD, L.R.C.P. Ed., Rhayader, Radnorshire.

1872 RICHARDSON, WILLIAM L., M.D., 76, Boylston street, Boston, Massachusetts.

1871 RICKARD, FREDERICK MARTYN, Assistant-Surgeon 25th Madras Native Infantry, Cavanore.

Elected

1872 RIGDEN, GEORGE, Surgeon to the Canterbury Dispensary, Burgate street, Canterbury.

1871 RIGDEN, WALTER, Resident Medical Officer, University College Hospital, Gower street, W.C.

1871 ROBERTS, ARTHUR, 30, Kensington square, Kensington, W. *Council*, 1874.

O.F.* ROBERTS, DAVID LLOYD, M.D., Surgeon to St. Mary's Hospital, Manchester; 23, St. John's street, Deansgate, Manchester. *Council*, 1868-70. *Vice-Pres.* 1871-2. *Hon. Loc. Sec.*

1867 ROBERTS, DAVID W., M.D., 56, Manchester street, Manchester square, W.

1860 ROBERTS, ROBERT PRICE, Shamrock House, Rhyl, Flintshire.

O.F. ROBINSON, THOMAS, M.D., 35, Lamb's Conduit street, W.C.

1868 ROBSON, HOPE F. A., M.D., Iver, near Uxbridge.

1868 ROGERS, ADAM MACDOUGALL, Surgeon, Bombay Army, Malabar Hill, Bombay.

O.F. ROGERS, WILLIAM RICHARD, M.D., Physician to the Samaritan Free Hospital; 56, Berners street, Oxford street, W. *Council*, 1870-72.

1871 ROOSE, E. C. ROBSON, 32, London road, Brighton.

O.F. ROOTS, WILLIAM SUDLOW, F.R.C.S., F.L.S., Surgeon to the Royal Establishment at Hampton Court, Kingston-on-Thames.

1860 ROPER, ALFRED GEORGE, 57, North End, Croydon, Surrey.

1865 ROPER, GEORGE, M.D., 6, West street, Finsbury circus.

1859 ROSE, HENRY COOPER, M.D., High street, Hampstead, N.W.

O.F. ROUTH, CHARLES HENRY FELIX, M.D., Physician to the Samaritan Free Hospital for Women and Children; 52, Montagu square, W. *Council*, 1859-61. *V.P.* 1874.

1869 RUSSELL, CHARLES JAMES, Rose Cottage, Messingham, Lincolnshire.

Elected

1866 SABOIA, V., M.D., Rio de Janeiro [*per* Captain Argollo, 1, Princes terrace, Bayswater].

1864 SALTER, JOHN H., D'Arcy House, Tolleshunt D'Arcy, Kelvedon, Essex.

1868* SAMS, JOHN SUTTON, St. Peter's Lodge, Eltham road, Lee, Kent.

1872 SANGSTER, CHARLES, 15, Lambeth terrace, S.E.

1870 SAUL, WILLIAM, M.D., 4, Charlotte street, Fitzroy square, W.

1863 SAVAGE, HENRY, M.D., Consulting Physician to the Samaritan Hospital for Women, Lower Seymour street, Portman square, W. *Council*, 1871-2.

1872 SAVAGE, THOMAS, M.D., Surgeon to the Birmingham and Midland Hospital for Women; Bordesley, Birmingham.

O.F. SCOTT, JOHN, F.R.C.S., Surgeon to the Hospital for Women, Soho square; 49, Harley street, Cavendish square, W. *Council*, 1868-70. *Vice-Pres.* 1871-3.

1870 SCOTT, JOHN, M.D., New street, Sandwich.

1873 SELL, EDWARD H. M., M.A., M.D., New York City, U.S.

1863 SEQUEIRA, HENRY LITTLE, 1, Jewry street, Aldgate, E.C.

1866 SEQUEIRA, JAMES SCOTT, 34, Leman street, Goodman's fields, E.

1860 SEWELL, CHARLES BRODIE, M.D., 76, Guilford street, Russell square, W.C., and 13, Fenchurch street, E.C.

1870 SEYDEWITZ, BARON PAUL VON, M.D., late Senior Physician to the East London Hospital for Sick Children, and Dispensary for Women; 4, Coleherne road, West Brompton, S.W.

1873 SEYMOUR, FRANCIS, Odiham, Hants.

1872 SHAPLAND, JOHN DEE, Thornton Heath, Croydon.

1862 SHARMAN, MALIM, Surgeon to the Birmingham Free Hospital for Sick Children; 18, New Hall street, Birmingham.

Elected

O.F. SHARPIN, HENRY WILSON, F.R.C.S., Surgeon to the Bedford General Infirmary, Bedford. *Council*, 1871-3.

1860 SHAW, GEORGE, Portland House, Battersea, S.W.

1869 SHAW, HENRY SISSMORE, 88, Upgate, Louth, Lincolnshire.

O.F. SHEARMAN, EDWARD JAMES, M.D., F.R.C.S., F.R.S. Ed., Consulting Physician to the Rotherham Hospital; Moorgate, Rotherham, Yorkshire.

1859 SHEEHY, WILLIAM HENRY, L.R.C.P. Ed., 4, Claremont square, Pentonville, N.

1867 SHEPHERD, FREDERICK, L.R.C.P. Ed., 33, King Henry's road, Primrose hill, N.W.

1859 SHIPTON, WILLIAM PARKER, Consulting Surgeon to the Devonshire Hospital; Buxton, Derbyshire.

1861 SHORTT, JOHN, M.D., Surgeon H.M. Madras Army, and Superintendent-General of Vaccination, Madras Presidency. *Hon. Loc. Sec.* [Agents: Messrs. Baring, Brothers, 8, Bishopsgate within, E.C.]

1860 SKINNER, THOMAS, M.D., Obstetric Physician to the Lying-in Hospital; Dunedin House, 64, Upper Parliament street, Liverpool. *Council*, 1865-66. *Hon. Loc. Sec.*

1859 SLEEMAN, PHILIP ROWLING, F.R.C.S., Montrose House, Queen's road, Clifton.

1861 SLOMAN, SAMUEL GEORGE, Farnham, Surrey.

1861 SLYMAN, WILLIAM DANIEL, 26, Caversham road, Kentish Town, N.W.

1860 SMART, THOMAS TOVEY, L.R.C.P. Ed., South Villa, Bedminster, Bristol.

1859 SMILES, WILLIAM, M.D., Surgeon to the House of Correction, Cold Bath Fields; 44, Bedford square, W.C.

1867 SMITH, HEYWOOD, M.D., Physician to the Hospital for Women, Soho square, and Physician to the British Lying-in Hospital; 2, Portugal street, Grosvenor square, W. *Council*, 1872-4.

1873 SMITH, JOSEPH, 43, David place, St. Helier's, Jersey.

Elected

O.F. SMITH, PROTHEROE, M.D., Physician to the Hospital for Women, Soho square; 42, Park street, Grosvenor square, W.

1859 SMITH, WILLIAM JOHNSON, M.D., Consulting Physician to the Weymouth Infirmary and Dispensary; Greenhill, Weymouth, Dorset. *Council*, 1869-71.

1860 SNELL, EDMUND, L.R.C.P. Ed., 59, Stepney green, E.

1866 SOPER, WILLIAM, Medical Officer, Jews' Hospital, Norwood 4, Clapham rise [283, Clapham road], S.W.

1869 SPAULL, BARNARD, F.R.C.S., Essex House, Vale place, Hammersmith, W.

1868 SPAULL, BARNARD E., 2, Vale place, Hammersmith, W.

1872 SPENCE, JAMES BEVERIDGE, M.D., County Asylum, Burntwood, Lichfield.

1859 SPENCER, GEORGE, 8, Kensington park road, W.

1862 SPRY, GEORGE FREDERICK, M.D., Assistant-Surgeon, 2nd Life Guards, The Barracks, Windsor.

1867 SQUAREY, CHARLES E., M.B., Assistant-Physician to the Hospital for Women; 13, Upper Wimpole street, W.

O.F. SQUIRE, WILLIAM, M.R.C.P., 6, Orchard street, Portman square, W. *Council*, 1866-68.

1860 STEDMAN, ROBERT SAVIGNAC, Sharnbrook Grange, Bedford.

1866 STEELE, ARTHUR BROWNE, L.K.Q.C.P. Ireland, Lecturer on Midwifery, Royal Infirmary School of Medicine; 54, Rodney street, Liverpool. *Council*, 1874.

1873 STEELE, EDWARD HARRY, Kingston-on-Thames.

1869 STEELE, HENRY MURRAY,

1873 STEWART, JAMES, M.D., 2, Skinner street, Whitby, Yorkshire.

1859 STONE, JOSEPH, M.D., 175, Upper Brook street, Manchester.

O.F. STOWERS, NOWELL, 125, Kennington park road, Kennington, S.E.

1866 STRANGE, WILLIAM HEATH, M.D., 13, Belsize Avenue, Hampstead, N.W.

1871 STURGES, MONTAGUE J., M.D., Elmstone House, Beckenham, Kent.

Elected

1859 STUTTER, FREDERICK AUGUSTUS, M.D., Farnboro' House, Upper Sydenham, S.E.

1870 SUMMERHAYES, WILLIAM, Upper St. Giles's, Norwich.

1862 SUTHERLAND, WILLIAM, M.D., 22, George street, Croydon, Surrey.

1862 SUTTON, FIELD FLOWERS, M.D., Balham hill, Clapham, S.W.

1859 SWAYNE, JOSEPH GRIFFITHS, M.D., Physician-Accoucheur to the Bristol General Hospital; Harewood House, 74, Pembroke road, Clifton, Bristol. *Council*, 1860-61, *Vice-Pres.* 1862-64. *Hon. Loc. Sec.*

1850 SWEETING, GEORGE BACON, M.R.C.P., King's Lynn, Norfolk.

1859 SYMONDS, FREDERICK, F.R.C.S., Surgeon to the Radcliffe Infirmary; 35, Beaumont Street, Oxford. *Council*, 1862-65. *Hon. Loc. Sec.*

1872 SZCZYGIELSKI, JOSEPH, M.D., St. Terska, No. 24, Warsaw, Russian Poland.

1871 TAIT, LAWSON, F.R.C.S. Ed. and Eng., L.R.C.P. Ed.; Surgeon to the Birmingham and Midland Hospital for Women, and to the Lying-in Charity; Consulting Surgeon to the Church Stretton Asylum for Ladies; 7, Great Charles street, Birmingham.

1866 TANNAHILL, ROBERT DUNLOP, M.D., Physician to the Lying-in Hospital; 106, Bath street, Glasgow.

1871 TANNER, JOHN, M.D., F.L.S., Physician for Diseases of Women, to the Farringdon General Dispensary, and Obstetric Physician to the Lying-in Charity, Holborn; Alfred House, Newington Causeway, S.E.

1859 TAPSON, ALFRED JOSEPH, M.B. Lond., 36, Gloucester gardens, Westbourne terrace, W. *Council*, 1862-64.

1863 TAPSON, JOSEPH ALFRED, Surgeon to the Clapham General Dispensary; 83, High street, Clapham, S.W.

1871 TAYLER, FRANCIS F., B.A. Lond., and M.B., Claremont villa, Lewisham road, S.E.

Elected

O.F. TAYLOE, EDWARD, South lodge, Clapham common, S.W.

1870 TAYLOR, ARTHUR, M.B., 248, Kennington park road, S.E.

O.F. TAYLOR, CHARLES, M.D., Pine house, Camberwell green, S.E. *Council*, 1869-71.

1859 TAYLOR, DAVID, 180, Kennington park road, S.E.

1869 TAYLOR, JOHN, Earl's Colne, Halstead, Essex.

1871 TAYLOR, JOHN W., M.D., 28, Queen street, Scarborough.

1862 TAYLOR, THOMAS, F.R.C.S., 19, Bennett's hill, Birmingham.

1872 TEMPLE, JAMES ALGERNON, M.D., Lecturer on Midwifery, Trinity College, Toronto.

1862 THANE, GEORGE DANCER, M.D., 15, Montague street, Russell square, W.C.

1872 THOMAS, JAMES BYER, Assistant-Surgeon H.M.'s Indian Army, Madras and Zillah Surgeon, Tinnevelly.

1870 THOMPSON, JOHN ASHBURTON, 207, Caledonian road, N.

1867 THOMPSON, JOSEPH, Junr., 1, Oxford street, Nottingham.

1869 THOMPSON, D. R., M.D., M.R.C.S., Officiating Civil Surgeon, 26th Native Infantry, Trichinopoly. [Messrs. de Beaux & Co., Esplanade Dispensary, Black Town, Madras.]

1867 THORBURN, JOHN, M.D., Lecturer on Midwifery, Manchester Royal School of Medicine; 333, Brighton place, Oxford street, Manchester.

1860 THORNE, GEORGE LEWORTHY, M.D., Swanage, Dorset.

1871 THORNE, WILLIAM BEZLY, 46, Harcourt terrace, Redcliffe square, South Kensington, S.W.

1862 THORNTON, WILLIAM HENRY, M.D., Springfield terrace, Dewsbury, Yorkshire.

1867 THORNTON, WILLIAM HENRY, Surgeon to the Royal National Sea Bathing Infirmary; Berkeley Lodge, Margate.

1873 TICEHURST, CHARLES SAGE, Bishop's Waltham, Hants.

1860 TIFFEN, ROBERT, M.D., Wigton, Cumberland.

1866 TILLEY, SAMUEL, 70, Union road, Rotherhithe, S.E.

Elected

O.F. TILT, EDWARD JOHN, M.D., Consulting Physician-Accoucheur to the Farringdon General Dispensary; 60, Grosvenor street, W. *Council*, 1867-68. *Vice-Pres.* 1869-70. *Treas.* 1871-2. *Pres.* 1873-4.

O.F. TIMES, HENRY G., 23, Manchester street, Manchester square, W.

1872 TOLOTSCHINOFF, N., M.D., Kieff, Russia.

1872 TOMKINS, ARTHUR WELLESLEY, B.A., M.D., 11, Easton place, Leamington.

1869 TOMKINS, CHARLES P., L.K.Q.C.P. Ireland, Beddington park, Croydon.

1870 TOWNE, ALEXANDER, Junr., 354, Kingsland road, N.E.

1865 TREND, HENRY GRISTOCK, L.R.C.P. Ed., 191, Southgate road, Islington, N.

1872 TRENHOLME, EDWARD HENRY, M.A., M.D., C.M., Professor of Midwifery, University of Bishop's College, Montreal, Canada.

1873 TRESTRAIL, HENRY ERNEST, F.R.C.S., L.R.C.P. Ed., 6, Trinity terrace, Victoria road, Aldershot.

1872 TUCHMANN, MARO, M.D., 148, Adelaide road, Haverstock hill, N.W.

1865 TURNER, JOHN SIDNEY, Surgeon to the Anerley Dispensary, Stanton House, Thicket road, Upper Norwood, Surrey.

1861 TURNER, RICHARD, Surgeon to the Lewes Dispensary; High street, Lewes, Sussex.

1871 TURTON, FREDERIC, Ablow House, Wolverhampton.

1861 TWEED, JOHN JAMES, Junr., F.R.C.S., 14, Upper Brook street, W.

1872 VANDERSTRAATEN, JULIAN LOUIS, M.D., Civil Medical Service, Ceylon.

1860 VARENNE, EZEKIEL G., Kelvedon, Essex.

1873 VERLEY, REGINALD L., L.R.C.P. Ed. 88, Gower street, W.C.

1864 WAHLTUCH, ADOLPHE, M.D., 280, Oxford street, Manchester.

Elected

1860 WALES, THOMAS GARNEYS, Jun., Downham Market, Norfolk.

1869 WALKER, ALFRED, M.B., Physician to the East London Hospital for Sick Children; [abroad] 17, Throgmorton street, E.C.

1866 WALKER, THOMAS JAMES, M.D., Surgeon to the General Infirmary, Peterborough; 18, Westgate, Peterborough.

1873 WALKER, THOMAS OSBORNE, Crick, near Rugby, Northamptonshire.

1870 WALLACE, FREDERICK, District Surgeon to the Royal Maternity Charity; 243, Hackney road, N.E.

1872 WALLACE, JOHN, M.D., Assistant-Physician to the Liverpool Lying-in Hospital; 4, Canning street, Liverpool.

1872 WALLER, CHARLES BEAUMONT, Sydenham, S.E.

1860 WALLER, JOHN TURPIN, Flegg Burgh, Norfolk.

1867 WALTERS, JAMES HOPKINS, Faringdon, Berks.

1873 WALTERS, JOHN, M.B., Reigate, Surrey.

O.F. WANE, DANIEL, M.D., 20, Grafton street, Bond street, W.

1860 WARD, JOHN, Penistone, Sheffield, Yorkshire.

1859 WARDEN, CHARLES, M.D., Hon. Surgeon to the Birmingham Lying-in Hospital; 39, Temple street, Birmingham.

1862 WATKINS, CHARLES STEWART, 16, King William street, Strand, W.C.

1861 WATTS, GEORGE HENRY, Thatcham, near Newbury, Berks.

1873 WAY, JOHN, M.D., 4, Eaton square, S.W.

1867 WEBB, FRED. E., 113, Maida vale, W.

O.F. WEBB, HENRY SPEAKMAN, Welwyn, Herts.

1872 WEBSTER, THOMAS, Malvern House, Redland, near Bristol.

1860 WELCHMAN, CHARLES EDWARD ELLIOT, Bore street, Lichfield, Staffordshire.

1867 WELLER, GEORGE, Forest lodge, Wanstead, Essex.

Elected

O.F. WELLS, T. SPENCER, F.R.C.S., Surgeon in Ordinary to H.M.'s Household; Surgeon to the Samaritan Free Hospital for Women and Children; 3, Upper Grosvenor street, W. *Council*, 1859. *Vice-Pres.* 1868-70.

1859 WESTMACOTT, JOHN GUISE, M.D., Medical Officer to the Paddington Provident Dispensary; 19, St. Mary's terrace, Paddington, W.

1870 WHEATCROFT, SAMUEL HANSOM, L.R.C.P. Ed., 3, Oak Villas, Gipsey road, Lower Norwood.

1860 WHEELER, DANIEL, Chelmsford, Essex.

1873 WHITE, FREDERICK BROAD, 500, Edgeware road, Maida hill, W.

1860 WHITE, FREDERICK GEORGE, L.R.C.P. Ed., Castle House, Chepstow, Monmouthshire.

O.F. WHITEHEAD, JAMES, M.D., Physician to the Manchester Clinical Hospital; 87, Mosley street, Manchester. *Council*, 1859-61. *Vice-Pres.* 1868-69.

1865 WHITEHEAD, WALTER, F.R.C.S. Ed., Surgeon to St. Mary's Hospital for the Diseases of Women and Children; Clareville, 248, Oxford road, Manchester.

1864 WHITMARSH, WILLIAM MICHAEL, M.D., Surgeon to the Hounslow Lying-in Charity: Albemarle House, Hounslow, Middlesex.

1867 WILBE, RICHARD HAYDOCK, M.D., York Lodge, 21, Finchley road, St. John's Wood, N.W.

1873 WILKINS, RICHARD, Hon. Assistant Surgeon, Madras Army, Demonstrator of Anatomy in the Medical College, Madras; Madras.

1871 WILKINSON, WILLIAM HENRY WHITEWAY, L.R.C.P. Ed., 268, Caledonian Road, Islington, N.

1861 WILLIAMS, ARTHUR WYNN, M.D., Physician to the Samaritan Free Hospital; 1, Montagu square, W. *Council*, 1871.

Elected

1861 WILLIAMS, DAVID JOHN, M.D., Queenscliff, Geelong, Victoria, Australia. *Hon. Loc. Sec.* [*Per* J. W. Voss, Esq., Yspitty works, Loughor, Llanelly.

1864 WILLIAMS, EDWARD, M.D., Holt street House, Wrexham.

1867 WILLIAMS, HENRY LLEWELLYN, M.D., 9, Leonard place, Kensington, W.

1872 WILLIAMS, JOHN, M.D., Assistant-Obstetric Physician to University College Hospital; 28, Harley street, Cavendish square, W.

1860 WILLIAMS, ROBERT HANKINSON, L.R.C.P. Ed., Great Eccleston, near Garstang, Lancashire.

1860 WILLS, JOHN, M.D., St. Helier's, J ersey.

1873 WILMOT, ROBERT EARDLEY-, M.B., Ottery St. Mary, Devon.

1859 WILSON, JAMES GEORGE, M.D., Professor of Midwifery in the Andersonian University, Glasgow; Physician-Accoucheur to the Glasgow Lying-in Hospital and Dispensary; 9, Woodside crescent, Glasgow. *Council*, 1863-64. *Vice-Pres.* 1865-67.

1873 WILSON, JOHN HENRY, L.K.Q.C.P. Ireland, Kensington Lodge, Kensington, Liverpool.

1860 WILSON, ROBERT JAMES, F.R.C.P. Ed., 7, Warrior square, St. Leonard's-on-Sea, Sussex. *Hon. Loc. Sec.*

1868 WILTON, JOHN, L.R.C.P. Ed., Chalk Pit House, Sutton, Surrey.

1866 WILTSHIRE, ALFRED, M.D., Assistant-Obstetric Physician to St. Mary's Hospital, and Physician for the Diseases of Women to the West London Hospital; Physician to the British Lying-in Hospital; 57, Wimpole street, Cavendish square, W. *Council*, 1870. *Hon. Lib.* 1871-3. *Hon. Sec.* 1874.

1866 WINTERBOTTOM, HENRY, Consulting-Surgeon to St. Mary's Hospital, Manchester; 56, Bury New road, Strangeways, Manchester.

Elected

1872 WISE, WILLIAM CLUNIE, M.D., Gothic villa, Burrage road, Plumstead, S.E.

1860 WISEMAN, WILLIAM WOOD, Springstone House, Ossett, near Wakefield, Yorkshire.

1872 WOOD, ROBERT ARTHUR HENRY, 102, Pembroke place, Liverpool.

1860 WOOD, WILLIAM JAMES, Brightwaltham, Wantage, Berks.

1864 WOODMAN, WILLIAM BATHURST, M.D., Assistant-Physician to the London Hospital; 6, Christopher street, Finsbury square, E.C.

O.F. WORSHIP, J. LUCAS, Manor House, Riverhead, Sevenoaks, Kent.

1871 YARROW, GEORGE EUGENE, M.D., 87, Old street, E.C.

1866 YEAMAN, GEORGE, M.D., 5, Windsor place, Sauchiehall street, Glasgow.

1870 YEATES, GEORGE, M.D., Grove road, Walthamstow, Essex.

1861 YOUNG, WILLIAM BUTLER, 10, Castle street, Reading, Berks.

1869 YULE, JOHN S. C., 78, Walmsey road, Bury, Lancashire.

CONTENTS.

	PAGE
List of Officers for 1874	v
List of Presidents	vi
List of Referees of Papers for 1874	vii
Standing Committees	viii, ix
List of Honorary Local Secretaries	x
Trustees of the Society's Property	xi
List of Honorary Fellows	xi
List of Ordinary Fellows	xiv
Contents	liii
List of Plates	lviii
Advertisement	lx

January 1st, 1873—

Annual General Meeting	1
Two forms of Apparatus for use in cases of Empyema in Children (Dr. B. Woodman)	2
I. On the necessity of adopting Laws by which the Wives of the Labouring Classes and the Poor shall have secured to them in their Labour the attendance of qualified Accoucheurs, female as well as male. By J. T. Mitchell, F.R.C.S.	3
II. A case of Prolapsus Uteri, in which the Neck of the Uterus was partially severed by a ligature of hair which had accumulated around it. By N. Coates, L.R.C.P. (communicated by the President)	9
Annual Meeting. Officers elected for 1873	11
—— Report of the Auditors of the accounts for 1872	12
—— Report of the Hon. Librarian	12
—— Reports of the Temperature and Pelvis Committees	14
—— Formation of a new order of "Corresponding Fellows"	15
Annual Address of the President, J. Braxton Hicks, M.D., F.R.S.	16

PAGE

February 5th, 1873—

Inaugural Address of the New President, EDWARD JOHN TILT, M.D. 30

Specimen of Dermoid Cyst exhibited by Dr. BARNES . 35

III. Description of a Cyclopean Monster (a wax model of it exhibited). By J. ASHBURTON THOMPSON, L.R.C.P. Lond.. 35

Ecraseur made by Krohne and Sesemann, exhibited by Dr. ROUTH 38

IV. Case of delivery by the Forceps in Face Presentation in the Mento-lateral Position. By J. BRAXTON HICKS, M.D., F.R.S., Lecturer on Midwifery and Physician-Accoucheur at Guy's Hospital 39

V. A case of Cephalotripsy, with short remarks (cast of fœtal head exhibited). By J. BRAXTON HICKS, M.D., F.R.S. . 41

VI. A case illustrating the treatment of Post-partum Hæmorrhage by the Intra-uterine Injection of the Perchloride of Iron. By HEYWOOD SMITH, M.A., M.D. Oxon., Physician to the Hospital for Women, and the British Lying-in Hospital 44

—— *Discussion* on ditto 50, 65

March 5th, 1873—

Uterus and Ovaries of a Child who had died of Tubercular Meningitis, exhibited by Mr. FLETCHER BEACH . 57

Segment of a large Tumour removed in India, believed at the operation to be an Ovarian Tumour, exhibited by Dr. W. H. HARRIS 58

Three Instruments, blunt-pointed hook, crooked trephine, and cranioclast, devised and used by Prof. Carl Braun, of Vienna, exhibited by Dr. SELL, of New York . . 58

VII. Puerperal Convulsions in the ninth month of Pregnancy; accouchement forcé, expansion of the cervix with Barnes's dilators and incisions; delivery of fœtus with parallel forceps; child stillborn; recovery. By J. LAZAREWITCH, Kharkoff 59

VIII. New Constrictor for the removal of tumours of the Uterus. By J. LAZAREWITCH 63

Adjourned Discussion on Dr. HEYWOOD SMITH's paper on the "Use of Perchloride of Iron as a means of arresting Post-partum Hæmorrhage" . . . 65

PAGE

April 2nd, 1873—

Child with malformation of Genital Organs, exhibited by Dr. Cooper Rose [examination, see p. 125] . . 85

Instrument called an artificial jaw or crusher, for dividing the Funis, &c., exhibited by Dr. Heywood Smith . 86

Improvement in the single wire Ecraseur for removal of large Uterine Fibroids, exhibited by Dr. Heywood Smith 86

IX. On the Progress of Pelvic Pathology during the last twenty-five years. By Edward J. Tilt, M.D., President . 87

X. On the Pathology of certain so-called Unilocular Ovarian Cysts. By Geo. Granville Bantock, M.D., Physician to the Samaritan Free Hospital . . . 105

Chemical examination of the contents of an Unilocular Ovarian Cyst. By Edward Divers . . . 118

Diagrams. By Dr. Junker 120-2

May 7th, 1873—

Specimens of Procidentia Uteri and inversion of Vagina, with hypertrophic elongation of the Cervix Uteri, exhibited by Dr. Barnes 124

Cyst from a case of Extra-uterine Fœtation. By Mr. Scott 124

Fœtus and Placenta in a case of Extra-Uterine Fœtation. By Mr. Ross Jordan 124

Pessary for cases of Anteflexion. By Dr. Playfair . 124

Ossification of Muscles, photographs of, shown by Dr. Sell . 125

Case of Extroversion of the Bladder; absence of rectum and symphysis pubis, and development of the Uterus in two lateral portions; exhibited by Dr. Cooper Rose [see p. 85]. Report and examination by Dr. Rasch and Dr. C. Rose 125

XI. Case of Extra-uterine Pregnancy; gastrotomy successfully performed. By William Ross Jordan . . 130

XII. Note on the Diagnosis of Extra-uterine Pregnancy. By Lawson Tait, F.R.C.S., Surgeon to the Birmingham Hospital for Women 135

XIII. Case of Extra-uterine Fœtation, with operation. By John Scott, F.R.C.S. 140

XIV. Case of Gastrotomy for supposed Extra-uterine Gestation. By Alfred Meadows, M.D., F.R.C.P., Physician-Accoucheur to, and Lecturer on Midwifery at, St. Mary's Hospital, Physician to the Hospital for Women . 145

PAGE

June 4th, 1873—

Resolution of Regret and Sympathy on the death of Dr. Tyler Smith 159

Meeting adjourned.

July 2nd, 1873—

Re-election of Dr. Henry Bennet as a Fellow of the Society, referred to by the President . . . 161

Fœtus with a diaphragmatic hernia, exhibited by Dr. Heywood Smith 162

Earthenware Bed-pan to allow of free ablution, and linen breast-supporter, exhibited by Dr. Squire . . 163

Drawing demonstrating the best mode of opening the vein in Transfusion. By Dr. Aveling . . . 164

Pneumatic India-rubber tube for facilitating the introduction of cylindrical specula, exhibited by Dr. Protheroe Smith 165

A case of Cæsarean Section. By R. P. Harris, M.D., President of the Obstetrical Society of Philadelphia . 166

XV. A case of Hypertrophic elongation of the Cervix Uteri at the full term of Pregnancy. By George Roper, M.D., late Surgeon to the Royal Maternity Charity . . 167

XVI. On the Fillet or Loop as an obstetric Aid, with especial reference to a new modification of the Instrument. By R. Eardley Wilmot, M.B. Lond. . . . 172

XVII. A case of complete Uterus Bicornis; pregnancy of the right horn; turning and extraction on account of Pelvic contraction; the conjugate diameter measuring only two and a half inches. By E. H. M. Sell, M.D., Fellow of the Academy of Medicine of New York . . . 180

October 1st, 1873—

XVIII. A case of Vesico-vaginal and Recto-vaginal Fistula, reported by T. Eyton Jones, Wrexham . . . 185

XIX. Note on the Muscular Susurrus in relation to the Fœtal heart sounds. By J. Braxton Hicks, M.D., F.R.S., Physician-Accoucheur to Guy's Hospital . . 187

XX. On the Spontaneous Separation of the Placenta when it is prævia. By J. Matthews Duncan, M.D., Lecturer on Midwifery, Edinburgh 189

XXI. On the Diagnosis of Subacute Ovaritis. By Edward John Tilt, M.D., President 202

PAGE

November 5th, 1873—

Presentation of photographs of Gynæcological and Obstetrical Instruments, and of the Pelvis collection at Charkoff. By Prof. LAZAREWITCH 217

Specimen of Malignant Sarcoma, exhibited by Dr. PLAYFAIR 217

Specimen of Necrosis of the Pubic Bones following delivery, exhibited by Dr. PLAYFAIR . . . 219

Flexible stems for the cure of flexion of the Uterus, exhibited by Dr. SQUAREY 221

New Instrument, called a "loop saw," to be used in some cases instead of the écraseur, exhibited by Dr. AVELING . 221

XXII. Case of Spontaneous Salivation associated with Pregnancy. By ARCHER FARR, L.R.C.P. (communicated by Dr. BLACK) 222

XXIII. On the Common Skin Diseases of Children. By ALFRED WILTSHIRE, M.D., M.R.C.P., Assistant-Physician Accoucheur to St. Mary's Hospital, &c. . . . 223

December 3rd, 1873—

Shield for supporting a Vulcanite stem Pessary in Anteflexions of the Uterus, exhibited by Dr. WYNN WILLIAMS . 246

XXIV. Note on the removal of Intra-uterine Tumours. By JOSEPH ALFRED TAPSON, M.R.C.S. . . . 247

XXV. Two cases of Extra-uterine Fœtation. By D. C. MACCALLUM, M.D., Professor of Midwifery in McGill University 248

XXVI. On the Use of Intra-uterine Stems in Uterine Disease. By C. H. F. ROUTH, M.D., Senior-Physician to the Samaritan Free Hospital for Women and Children, &c. . . 252

PLATES.

PAGE

I. Uterus from a case of Post-Partum Hæmorrhage, treated by injection of Perchloride of iron, anterior aspect (Dr. HEYWOOD SMITH) 47
II. Ditto ditto posterior aspect (ditto) . 48
III. Fœtus with a Diaphragmatic Hernia (ditto) . 162

N.B.—In the previous volume (Vol. XIV) the following corrigendum as to Plate I should be made in the list of plates:

I. Origin of Cystic Disease of the Ovary (Dr. MEADOWS) . 39
II-VII. The Anatomy of the Human Placenta (Dr. B. HICKS) 159—183

Woodcuts.

PAGE

1. Ring of hair accumulated as a ligature round the neck of the Uterus (Mr. N. Coates) . . . 10
2. Contractile fibres with truncated ends from the depression on the posterior wall of the uterus; stained black, interspersed with granular matter less stained (Dr. Heywood Smith) 49
3. Constrictor for the removal of Tumours of the Uterus (J. Lazarewitch) 64
4. Unilocular Ovarian Cysts: uterus, ovary, and parovarian cyst (Dr. Bantock) 120
5. Diagram illustrating growth of Parovarian Cysts (Dr. Bantock) 121
6. Epithelium from Ovary of a Rabbit, horizontal and other sections (Dr. Bantock) 122
7. Pessary for cases of anteflexion (Dr. Playfair) . . 124
8. Malformation of Genital Organs; extroversion of bladder, absence of rectum and symphysis pubis, &c.; entrances into colon and into cul-de-sac (Dr. Cooper Rose) . 127
9. —— ditto, right and left portion of uterus . . . 129
10. Demonstration of the best mode of opening the vein in Transfusion (Dr. Aveling) 164
11. Pneumatic India-rubber tube for facilitating the introduction of cylindrical specula (Dr. Protheroe Smith) . 165
12. Superior strait of the Pelvis in a case of Cæsarean section (Dr. R. P. Harris) 166
13. Hypertrophic elongation of the Cervix Uteri at the full term of Pregnancy (Dr. G. Roper) . . . 168
14. The fillet or loop, modification of Dr. Westmacott's instrument (Dr. R. Eardley Wilmot) . . . 177
15. Necrosis of the pubic bones following Delivery (Dr. Playfair) . 220

ADVERTISEMENT.

The Society is not as a body responsible for the facts and opinions which are advanced in the following papers and communications read, or for those contained in the abstracts of the discussions which have occurred, at the meetings during the Session.

OBSTETRICAL SOCIETY

OF

LONDON.

SESSION 1873.

ANNUAL GENERAL MEETING.

JANUARY 1st, 1873.

JOHN BRAXTON HICKS, M.D., F.R.S., President, in the Chair.

Present—37 Fellows and 8 visitors.

Books were presented by Dr. Emile Nicolas-Duranty, Professor Rizzoli, and Professor Luigi Medini.

Mr. Arthur H. W. Ayling was admitted a Fellow of the Society. The following gentlemen were declared admitted: —Mr. Robert A. H. Wood (Liverpool), Dr. J. B. Spence (Burntwood), and Mr. Edward N. Carless, M.B. (Devizes).

The following gentlemen were elected Fellows:—Henry Marcus Allen, M.R.C.S. (Brighton); J. Braithwaite, M.D.

(Leeds); Henry Reginald Hatherly, L.R.C.P. Ed. (Nottingham); Thomas C. Hayes, M.R.C.P.; W. V. Jakins, M.R.C.S. (Ballarat); Herbert A. Lawton, M.R.C.S.; John Walters, M.B. (Reigate); F. B. White, M.R.C.S.; John Henry Wilson, L.K.Q.C.P. Ireland (Liverpool).

The following Gentlemen were proposed for election:—Dr. George Bate; Dr. J. M. Briggs (New York); Mr. Robert Eardley Wilmot (Harrow); Mr. T. Osborne Walker (Rugby); and Dr. John Way.

Dr. Bathurst Woodman exhibited two forms of apparatus, made for him by Messrs. Krohne and Seseman, intended for use in cases of Empyema in children. The idea was suggested to his mind by Dr. Playfair's instrument and paper in the Transactions. The cheaper form was simply a bent glass tube, filled with disinfecting fluid, and there were clips, as used by chemists, on the india-rubber tubes attached. The more expensive form consisted of a *reversatile* Higginson's syringe adapted to the tubes, and with stopcock, &c., and whilst intended to be worn (filled with disinfecting fluid) could be used either to exhaust the pleura or to inject deodorants or disinfectants. Both were very simple and cheap. Whilst wearing them the little patients could walk about.

ON THE NECESSITY OF ADOPTING LAWS BY WHICH THE WIVES OF THE LABOURING CLASSES AND THE POOR SHALL HAVE SECURED TO THEM IN THEIR LABOURS THE ATTENDANCE OF QUALIFIED ACCOUCHEURS, FEMALE AS WELL AS MALE.

By J. T. Mitchell, F.R.C.S.

It is too well known that great fatality occurs in labour and in the puerperal state among the wives of the poor and labouring classes, and even to too great an extent also among others in better circumstances of life, which has been the consequence of parturient women being attended by women and others, untaught in even the simplest knowledge of what are the normal and abnormal circumstances connected with parturition, as well as of other conditions (jeopardising the patient) that may be connected with the puerperal state.

This calls loudly on the medical profession, and especially on this Institution, established amongst other objects for the purpose of rendering more safe the condition of parturient and puerperal women by securing for them well-instructed midwifery practitioners. It is therefore its duty to use its influence to make every exertion, and to use every means in its power to prevent the occurrence of the well-known evils which so frequently arise from women being left under the treatment of ignorant persons in times of labour; and to obtain, if possible, by parliamentary enactment, powers that will secure to every poor woman the attendance of qualified superintendence in labour, making it punishable for any person to undertake such superintendence who is not qualified in obstetric knowledge. Such persons should possess at least such an amount of knowledge as to be able to distinguish between normal and abnormal circumstances preceding and occurring during the process of labour, such as slight hæmorrhage, indicating the

existence of placenta prævia, or the preternatural presentation of the fœtus, or the narrowed condition of the bony passages, so that in every such case such persons should know when to call in the more qualified aid of an experienced accoucheur to conduct the case according to its requirements, and thereby to prevent a fatal catastrophe.

In an extended period of midwifery practice, very many fatal cases have come under my observation which have been the result of ignorance and maltreatment during labour, as well as others in which permanent avoidable injuries have been the result of the same cause. The great extent to which these fatal evils exist has been additionally and most clearly demonstrated to me in the execution of my duties as Medical Director of the United Kingdom Temperance and General Provident Life Office, which office I have filled during more than thirty years. In this capacity, amongst other duties, I have had to examine every paper setting forth the personal and relative condition of the candidates for admission, and in each paper a question is asked, "of what illness or from what cause did your parents or brothers and sisters die?" when the answer in very numerous cases has been that the mother or the sister had "died in childbed."

This induced me to collate a statistical account of such cases, which I commenced in April, 1871, and which I have continued up to the present month. The result of this inquiry is truly appalling, for among 3394 cases of proposals for insurance I find that 267, either mothers or sisters, have died "in childbed;" whereas, a record of twenty years of an extensive parochial practice, in which women midwives, qualified to attend all ordinary normal cases of labour, attended the patients, and whose duty it was to call in my aid in every abnormal case, I find the mortality amounted only to about a dozen cases out of 4000.

In directing this practice, I took especial care that the women midwives so employed had sufficient knowledge to discern early in labour what was simple natural labour, and what in any particular deviated therefrom, so that in

every case of the latter character my aid was obtained at the earliest period of its progress.

A large number of the persons who seek to insure their lives in the Institution to which I have alluded are of the class of skilled mechanics—superior labourers, and small shopkeepers—such as have to a great extent their wives attended in labour by women midwives; therefore I can conclude that the extent of fatality set forth has arisen from the ignorance of such women. For this reason therefore I congratulate this Society on having initiated an examination by which the qualifications of women midwives shall be tested; and now it remains that a plan be devised for the *instruction* of this class. I am not an advocate for casting the high responsibilities connected with the treatment of abnormal labour upon women, but I would make it imperative that all women, undertaking to attend in ordinary normal cases, should be sufficiently instructed to know when such cases are becoming abnormal, and requiring skilled instrumental or manual aid. At this point the duties of midwives should cease, and the responsibility of the case be transferred to the better qualified male accoucheur.

The question is, How are such women to be instructed to the extent suggested, and how are they to obtain testimonials of qualification thus to practise? This can be done by allowing all practitioners, holding diplomas of efficiency as accoucheurs, to teach select women residing in their districts what are the ordinary phenomena attending normal labour, and what is the simple duty of the accoucheur under these circumstances. And also to point out what are the indications of an abnormal condition, and further to direct his pupils that, when any such shall be present, it is their duty immediately to seek for more qualified aid. When such knowledge has been obtained, then a certificate of qualification to practise should be granted.

The enforcing of such a system would tend greatly to prevent the present wholesale sacrifice of life, among a class compelled to rely only on the aid that women can give in their times of labour.

I gladly hailed the decision come to by the Obstetrical Society that it should institute an examination of women midwives, and grant certificates of qualification to those possessing the requisite amount of knowledge; and we have the greatest satisfaction in knowing that a most highly qualified Board of Examiners has been appointed for that purpose. This is the initiation of a new and most desirable system, but the limited extent to which it can only thus be carried out in London is not sufficient, and it is necessary that it should be extended to a more general sphere.

Writers in medical periodicals have severely criticised, and some have even gone so far as sternly to condemn, the decision of this Society; but it is evident that such objectors have never had opportunities of observing the direful consequences that so frequently result from untaught ignorant women undertaking to conduct labour. At present there is no law to compel women midwives and others to qualify themselves to the simple extent to which I have alluded. I therefore suggest that the Obstetrical Society should further consider the subject, and should use its influence to procure a law that will secure such knowledge in every midwife.

Instructions given to women midwives regarding their duties in all abnormal cases of labour to which they may be called. They are directed forthwith to procure the aid of a qualified and responsible medical attendant:

1st. In all cases in which the patients are in delicate health and require medical attendance.

2nd. In every case in which there is any preternatural presentation.

3rd. In all cases in which there is the slightest hæmorrhage in early labour or during its progress, or when the slightest appearance of convulsions is observed.

4th. In all cases where labour is protracted either

by narrow bony passages, want of uterine power, or any other cause.

Regarding their duties during the progress of simple natural labour.

1st. To avoid the administration of alcoholic stimulus.

2nd. Carefully to watch every circumstance occurring during labour.

3rd. To take care that the urinary bladder is not much distended, and to relieve it, if necessary, by the introduction of the catheter.

4th. In the latter stage of labour to have a broadly-folded napkin loosely pinned over the abdomen and around the loins ready to be tightened after delivery.

5th. To retard by pressure on the perineum and external parts, rather than to hasten by any means, delivery in the last stage of labour, and to avoid any traction on the parts first delivered, but rather to wait for the natural contraction of the uterus, to expel the body by its own power and action. This seldom fails to prevent post-partum hæmorrhage.

6th. To wait for the crying or perfect respiration of the child before applying the ligature on the funis, and then to apply it about two inches from the abdomen.

7th. If no hæmorrhage be present, to wait for the natural expulsion of the placenta by the contraction of the uterus, having applied the hand over the hypogastric region to feel if the uterus has contracted or was contracting, but if the placenta remain unexpelled after a short time, to make very slight traction on the funis, pressing on the uterus at the same time through the abdominal walls ; but—

8th. If much hæmorrhage come on, to introduce the hand into the uterus, applying pressure thereby on the placenta, whilst at the same time making pressure on the uterus, and moulding it through the abdomen until it shall contract and throw off the placenta, expelling it with the withdrawing hand.

9th. To avoid the moving of the patient for some time after delivery; and if any approach to fainting occur, but not otherwise, to give small quantities of brandy in hot water.

Dr. Snow Beck said the education of midwives was a subject well worthy of careful consideration. He considered them a necessary part of the profession. They had always existed, and would continue to exist to supply the requirements of the working classes. He understood that a clause was introduced into the charter of the Royal College of Surgeons which gives the Council the power to examine and grant certificates of proficiency to midwives if they should please to do so; that the subject had been brought before the Council of the College, and that some members of the Council were favorably disposed to entertain the application. But, of course, it was impossible to say what the decision of the Council might be. It would be very desirable if the Council of the College should undertake the duty of instituting a class of better educated midwives, although many of the present midwives were very judicious and able practitioners. But the great difficulty consisted in finding the means for furnishing such an education as would satisfy the probable requirements of the Council prior to admitting the women to examination. For example: lectures in anatomy, physiology, medicine, and midwifery, with clinical instruction in a hospital which contained a sufficient number of beds. But these difficulties might be overcome if a determined effort was made in the proper direction.

Dr. Cleveland thought the author had embodied some practical suggestions in his paper. If the poorer classes must of necessity be attended by midwives, it was most desirable that they should know how far they might conduct cases with safety on their own responsibility. From early recollections of the practice of midwives in the country he could testify to the deplorable results of gross ignorance and assumption. He thought the remarks in the paper were intended to refer to the instruction of midwives in the management of the most simple cases only, and to the necessity of teaching them the proper time when to call in further assistance.

Dr. Edis remarked that there had been a School of Midwifery at the British Lying-in Hospital, Endell Street, for many years past exclusively for the education of midwives, and that within the last few years the class of women presenting themselves as candidates had altered very materially for the better.

Dr. J. J. Phillips said the importance of the subject treated of by Mr. Mitchell could not be overestimated. He could from

personal observation testify to the satisfactory results obtained from such an arrangement as that suggested in the paper. As physician of the eastern districts of the Royal Maternity Charity he had about twenty midwives acting under his supervision, and they attended every year about two and a half thousand cases; they were able at once to recognise any deviation from the course of natural labour, and were generally very acute in the early detection of malpresentations. The plan adopted for the education of these midwives was for them to attend two courses of lectures delivered by the senior physician of the Charity, Dr. Hall Davis, and, at the same time, to attend under the guidance of one of the district midwives a certain number of cases of labour. Dr. Davis then examined them, and if they passed a satisfactory examination they were appointed as supernumeraries to assist the appointed midwives, and ultimately each one succeeded to a district of her own. Dr. Phillips' experience of the working of the Charity was a most satisfactory one. While the midwives were taught the proper method of acting in cases of emergency, no time was lost in sending for assistance; and he could not recall a case where a patient suffered from having been left too long in labour. Probably no one would doubt the necessity of educating up to this standard all women acting as midwives. The licensing of women for the more responsible duties of midwifery practice was, however, a different question; he considered it most inadvisable to do so unless they underwent a complete course of medical education.

A CASE OF PROLAPSUS UTERI, IN WHICH THE NECK OF THE UTERUS WAS PARTIALLY SEVERED BY A LIGATURE OF HAIR WHICH HAD ACCUMULATED AROUND IT.

By N. Coates, L.R.C.P.

(Communicated by the President.)

Mrs. D—, æt. 60; married; never had any family; never been pregnant; general health good. Ceased to menstruate about the age of fifty; for the past four or five years has noticed a slight swelling protruding from the

vagina; thought it was due to piles, and never suffered much from it. She lives a very sedentary life, taking very little walking exercise. About three months ago she went to the seaside with a friend, and there she walked much more than she was accustomed to do when at home. Out walking one evening, she sat down suddenly on the stump of a tree, which immediately gave her pain, and a profuse discharge of blood followed. She with difficulty walked home with assistance and went to bed. The hæmorrhage ceased that night, and after a few days' rest she was restored to her usual health. The swelling has ever since continued, giving her but very little pain; but there is a slight sanguineous discharge.

When I was called to see her I found, at the os externum, on examination, a tumour about the size of a walnut, but longer and not so round, feeling like hæmorrhoids.

I told her I should like to see the swelling, to which she readily consented. I then found the tumour as described; it had the appearance as if it had been ulcerated, for there were cicatrices on it. The neck was about an inch long, about the size of a penholder, which the size of the ring of

hair confirmed. The neck also appeared as if it had been partially cut through. Part of the neck was in and part out of the vagina, and around the part which was out, close to the vulva, there was the ligature. I said to the female who was in the room, "Why, there is a string around this swelling." "Yes, indeed, there is, sir," was her reply, and she was astonished as well as myself, the patient

asserting that she had never put anything around it, nor had any other person. I was very doubtful about the matter, but I had no reason to doubt the old woman's word. I then cut it off with a pair of scissors, and found it was a ring of hair. It was not then very tight; the scissors went under it easily. I then examined her vagina, and found that the uterus was drawn down in the vagina, and I traced the neck out of the vagina with its os, which was so dilated that I really, at first sight, could not detect the os which I looked for.

In my opinion the ring had been for some long time accumulating, and the vaginal secretions had matted the hair together.

ANNUAL MEETING.

Dr. Westmacott and Dr. Lucey were nominated by the President to act as scrutineers of the ballot, and after nine o'clock their report was read, from which it appeared that the following list of office-bearers recommended by the Council had been adopted.

Honorary President.—Sir Charles Locock, Bart., M.D.

President.—Edward John Tilt, M.D.

Vice-Presidents.—John Clay (Birmingham); Edward Copeman, M.D. (Norwich); Henry Gervis, M.D.; Henry M. Madge, M.D.; W. S. Playfair, M.D.; John Scott, F.R.C.S.

Treasurer.—Gustavus C. P. Murray, M.D.

Honorary Secretaries.—John J. Phillips, M.D.; James H. Aveling, M.D.

Honorary Librarian.—Alfred Wiltshire, M.D.

Honorary Members of Council.—William Tyler Smith, M.D.; Henry Oldham, M.D.; Robert Barnes, M.D.; John Hall Davis, M.D.; Graily Hewitt, M.D.; John Braxton Hicks, M.D., F.R.S.

Other Members of Council.—James Watt Black, M.D.; John Meaburn Bright, M.D.; George B. Brodie, M.D.; John Brunton, M.D., William Henry Day, M.D.; James Duncan, M.B.; Arthur W. Edis, M.D.; James Ellison, M.D. (Windsor); James Fowler, M.R.C.S. (Wakefield); Samuel Day Goss, M.D.; John Rutherford Kirkpatrick, M.B. (Dublin); Draper Mackinder, M.D. (Gainsborough); William Newman, M.D. (Stamford); John Baptiste Potter, M.D.; Adolphus A. F. Rasch, M.D.; Leonard William Sedgwick, M.D.; Heywood Smith, M.D.; Henry Wilson Sharpin, F.R.C.S. (Bedford).

The report of the auditors of the balance sheet for 1872 (Dr. Cleveland and Dr. Grigg) was then read, which stated that the income of the Society for the past year had been £698 14*s.* 7*d.* The sum of £247 9*s.* 9*d.* had been expended on the volume of 'Transactions,' and in printing circulars for various committees; £283 18*s.* 4*d.* on the Library and the Museum, and £116 3*s.* 9*d.* in general expenses. The sum of £51 2*s.* 9*d.* remained in the hands of the Treasurer, while the amount belonging to the Society and standing in the names of Trustees in 3 per cent. consols was £1381 5*s.* 9*d.*

The adoption of the Report was moved by Dr. Murray, seconded by Dr. Woodman, and carried unanimously.

The following Report of the Honorary Librarian for the year 1872 was then read and adopted.

Mr. President and Gentlemen,—In presenting a Report of the Library and Museum for the past year, I am glad to be able to assure you of their continued usefulness. There has been again an increase in the number of visitors,

and the number of books taken out for home perusal shows how highly this branch of the Library is appreciated. One hundred and forty-seven volumes have been added to our shelves during the year, including twenty-nine donations.

In addition to a new writing table, a handsome new case for the valuable collection of pelves presented by Dr. Arthur Farre has been procured. It is sufficiently large to accommodate the important pelves presented by Professor MacCallum, of Montreal, Professor Betz, of Kieff, Dr. Lloyd Roberts, and Dr. Yarrow. The other additions to the Museum have consisted chiefly of morbid specimens, for the reception and preservation of which special arrangements have been made.

Some of the furniture has required renovating during the year, and accordingly the curtains and hangings have been re-dyed and restored, new blinds have been put up, and the gas and other fittings have been cleaned and repaired. A handsome pedestal has been purchased at a small cost for the bust of the late Dr. Rigby.

A considerable number of foreign, American, and other visitors have made use of the Library and Museum at the invitation of Fellows, and there is good reason for believing that the courtesy thus shown them has been highly valued.

The Library has again been found most useful for the purposes of the various committees meeting there from time to time, and also for the meetings of the Board of Examiners for Midwives lately instituted by the Society.

In conclusion, I would express the hope that the Library and Museum as a combined branch of the Society's operations may continue to be increasingly useful, in furtherance of which object any suggestions will be gladly received, and, if practicable, willingly carried out by the Library Committee.

A. Wiltshire, M.D.

The following reports of the Committee for the collection of observations on Temperature during pregnancy, parturition, and the puerperal state; and of the Committee for the collection of specimens of pelves, were then read, and were adopted on the motion of Dr. Rogers, seconded by Dr. Potter. The thanks of the Society were also given by the President to the members of these Committees.

Report of Temperature Committee.

Your Committee have to report that they are still continuing their functions. They have issued forms to a great number of Fellows, and will be always happy to forward them to any applicants. They have met with excellent response in a few quarters, but have not as yet sufficient observations to make any formal communication to the Society. Indeed, it has been a matter of some regret that, though some have ably responded, the majority have not assisted.

The Committee, therefore, take this opportunity of pointing out to the Fellows the importance of the subject, and the ease and rapidity with which this information could be obtained if each Fellow would but only undertake one or two cases.

(Signed) William Squire, M.R.C.P., *Chairman,*
Arthur W. Edis, *Hon. Sec.*

Report of Pelvis Committee.

In the spring of 1871 the Society appointed a Committee of fourteen, with power to add to their number, to be called the Pelvis Committee, whose object should be the collection of specimens of pelves of various races, of abnormal pelves, as also histories, drawings, casts, &c., of such. The Committee met in May, 1871, added eleven more to their number, men chiefly in the colonies and provinces, and appointed Dr. Barnes chairman and Dr.

Wiltshire and Dr. Heywood Smith secretaries. The Committee have had several (seven) meetings, and have opened up the subject by a very wide correspondence with medical men in various parts of the globe, including the most renowned men of the chief continental and American cities, as well as our Honorary Fellows. They have also asked for aid from the Directors General of the Medical Departments in both the Army and Navy, from whom they have received favorable answers. The efforts of the Committee have already been well responded to: they are in possession of about thirty pelves, including a large and valuable donation from Dr. A. Farre of twenty-five pelves, several volumes relating to the pelvis, and among the photographs a series of sixty-two stereographs from Dr. A. E. Martin, of the University of Berlin, from which the Committee have permission to make a selection with the view of having casts made. The Committee believe that by steadily keeping the objects they have in view before those in a position to supply their want, they will eventually be in possession of such a collection of pelves and works thereon as will be second to none in existence.

ALFRED WILTSHIRE, } *Hon Secs. of the Pelvis*
HEYWOOD SMITH, } *Committee.*

The formation of a new order of Fellows, to be called Corresponding Fellows, was proposed by Dr. Tilt and seconded by Dr. Wiltshire. This necessitated certain additions to be made to the Bye-Laws, and these additions were put to the meeting and carried unanimously. The additions are printed in italics.

CHAPTER I.—Section 2. The Society shall consist of Fellows, [and] Honorary Fellows, *and Corresponding Fellows.* The Honorary Fellows shall not exceed in number twelve British subjects and twenty Foreigners; *and the Corresponding Fellows shall not exceed twenty in number; they shall be Foreigners, or British subjects resident out of England, and before Election shall have assisted in the work of the Society.*

Chapter III.—Section 1. Of the election of Honorary *and Corresponding* Fellows. The Council shall have the power of recommending persons for election as Honorary *and Corresponding* Fellows of the Society. The election shall be conducted in the same manner as that of ordinary Fellows. They shall enjoy all the privileges of other Fellows, but shall not be required to pay any fee.

A vote of thanks to the retiring officers of the Society (Dr. Braxton Hicks, Dr. Tilt, and Dr. Playfair) was proposed by Dr. Meadows, seconded by Dr. Madge, and carried by acclamation.

Dr. Hicks, Dr. Tilt, and Dr. Playfair returned thanks.

The President then delivered the Annual Address.

ANNUAL ADDRESS.

Gentlemen,—It has been customary at this the annual meeting for your retiring President to make a few remarks upon the condition of the Society as it stands, a few upon its future prospects, and to offer a few words of benediction.

Regarding our present condition, I cannot do more than repeat the remarks of each of your former Presidents on this topic—mutual gratulations on our prosperity, both in numbers and in funds. It is not a light matter that we are able at the end of our thirteenth year to say that we have remained at a height of success equalled by few societies, without one descent to mar our progress. Therefore it is that our congratulations seem to partake of the nature of monotony, yet it is an evidence of life and health.

The report of our finances you have just heard ; of course the number of Fellows corresponds to our income. At present we have 634 Fellows, being an increase of thirty-

seven over that of last year, and one is always gratified to find that there is a considerable difference between the number of Fellows and the annual income, because it represents not only the interest of funded money, but also, by the sale of our 'Transactions,' the value at which our work is estimated abroad.

Regarding the putting by of part of our income, we have had to consider how much is needed to sustain us under any sudden pressure, and how much we can spare to further the objects for which the Society was founded. Probably future councils will consider the amount now funded sufficient for all likely contingencies. This being so, we are now free to devote the surplus that exists over the expenses of meetings and of the 'Transactions' to the many objects we have in view; of those which the Society has already undertaken I shall, in a few minutes, give an account.

It is a matter for much thankfulness that our losses by death have been but few. Of our own officers not only has there been no loss, but, further, there has been no serious hindrance to work by ill health; though for a short time we were deprived of our senior Secretary's assistance by a poisoned wound, which illness however ended favorably. These are indeed matters for congratulation, because in our branch of the profession our work is hard; a strong constitution is an enormous advantage, and I think I am not far wrong in saying that, in London, complete success is as much dependent on a powerful constitution as on a powerful intellect.

But in the ordinary tide of life it could hardly be but that, whether from age, or a weak system, or overwork, the common lot of all would overtake some of us, and thus I have to record the death of seven of our Fellows, of one Honorary and six Ordinary; of each of these I will, as usual, give a short notice, and first of our Honorary one—

Thomas Edward Beatty. Born on the first day of this century, died May 3rd, 1872.

About a week previous to his death he had a tooth extracted; diffuse cellular inflammation of the cervical region

followed, accompanied by great depression, and he sunk from suppurations and pyæmia.

No one who had ever the pleasure of knowing him will forget the genial conversation, the pleasing manner, the unflattering allegiance, with which he won all hearts. But his fame depended on something more substantial than these things. Perhaps his professional career is the best evidence of his other qualities. At the age of fourteen he entered Trinity College, Dublin. In 1820 he proceeded to the degree of Doctor of Medicine at Edinburgh, and the following year joined the Royal College of Surgeons, Ireland. In 1824 he became a Fellow of the College, and then began practice; inclining to the branch of obstetrics and gynæcology. After some years he was chosen Master of the South Eastern Lying-in Hospital; and shortly after the chair of Medical Jurisprudence, at the College of Surgeons, was conferred upon him. In 1832 he assisted in founding the City of Dublin Hospital, of which he became trustee, and to which he was attached as consultant in midwifery until his death.

He now soon acquired a large practice. He was made President of the Royal College of Surgeons in Ireland, he became President of the Dublin Obstetrical Society, and in 1859 he was made President of the Pathological Society of Dublin. In 1864 the King's and Queen's College made Dr. Beatty their president. At this time the title of Doctor of Medicine was granted to him, *honoris causâ*, by the University of Dublin. Honours were showered thickly upon him. He was elected a member of the Royal Irish Academy and of the Geological Society of Dublin; Honorary Fellow of the Obstetrical Societies of Dublin, Edinburgh, and London. He was Professor of Midwifery for many years in the College School of Midwifery. His professional work showed the wide range of his knowledge. His early work of note was a paper on aneurism of the abdominal aorta, from which our subsequent knowledge may be said to date. He contributed various papers in the 'Dublin Quarterly Journal,' and essays in the 'Cyclopædia of Practical Medi-

cine.' These he republished in 1866 under the title of 'Contributions to Medicine and Midwifery.' Besides this, when the British Medical Association met for the first time in Dublin in 1867, he was chosen to give the address in the Midwifery Section, and delivered then one which showed him well acquainted with the current literature; again when it met, in Plymouth, he was chosen President of the section for that year, communicating then two papers.

This short account will give you some idea of his attainments, and of the estimation in which he was held by others. Once or twice we have had him within these walls, but those who had seen him in the chair, have seen him in discussion, have known him in the social circle, these alone can feel how much they have lost in the death of Dr. Beatty.

Ordinary Fellows.

James Utten Easson, of Stoke Pogis, Slough, Bucks, M.R.C.S., L.S.A., died of emphysema, March 12th, 1872. He had for many years retired on a handsome independence. He was formerly Surgeon of the Metropolitan Free Hospital.

Samuel W. Brown, of Lewisham, Kent. Born 1805, died 21st of April 1872. He was a Fellow of the Royal College of Surgeons. He was a man of much physical and mental energy; delighting in entertaining his professional brethren and friends, in whose memories his pleasant *réunions* will long linger.

Laurence Spencer, of Preston. He was a Fellow of the Royal College of Surgeons, L.S.A., L.R.C.P. Edinburgh, M.D. Aberdeen, twice President of the Lancashire and Cheshire Branch of the British Medical Association. He was twice Mayor of Preston. He enjoyed a very high reputation both as a skilful practitioner and as a kind and philanthropic gentleman. He died May 1st, 1872, from erysipelas of the face, which he had probably caught from a patient he was attending with that disease.

John Corker, of Bank Hey, Blackpool, Lancashire, M.D., F.R.C.P., &c. He was a Justice of the Peace for the county.

Alfred Armstrong, L.R.C.P. Eng., of Lower Norwood. Died in December, 1871, of diphtheria caught in the discharge of his professional duties.

John Macrae, M.R.C.S. Edin. He was at first in the Honorable East India Company's Service, but ill health obliged him to return to England. He first practised in Hurstmonceaux, Sussex, whence he returned to Lewes in 1843. He died suddenly from diseased heart at the age of sixty. He had an excellent and extensive practice.

Knowing the great responsibility which rests upon it, not only of sustaining the high status of this Society, but also of advancing it to a still higher degree of success, your Council has considered that some portion of its income could not be laid out to better advantage than in the formation of committees, to ascertain some of the facts of the knowledge of which we stand in so much need. I told you on a former occasion that a committee exists which has undertaken to collect facts with regard to puerperal temperatures. There is another one, the Pelvis Committee, to collect pelves and fœtal heads of all kinds. The work of this committee has been very satisfactory; and we have already had numerous presents of very interesting specimens and promises of much more help. Now these committees are standing ones, with power to add to their number, so that their action is not spasmodic, their work is not intended to be wearisome or pressing; and from time to time the result of their endeavours will be published in the 'Transactions.' Again, a third committee has been founded at the suggestion of Dr. Routh to examine into the best mode of employing transfusion of blood. From the names forming this committee, and from the names of those who have offered to assist it, we may expect some satisfactory solution of a long-discussed question. There are many other points upon which information as to facts are much needed, and these we trust in due time will receive attention.

But, gentlemen, there is one caution which I think it advisable to give in respect to the action of committees. It is a common feeling not only in this Society, but in all such societies, that when once a committee has been formed assistance from the general body of the Fellows is not needed nor required; but a committee, on the contrary, is only the active agent or medium for collecting the facts, which the general body can supply. There is scarcely one of you who could not furnish one fact at least on the subject required. The Committee collects these; and thus a number is accumulated from which deductions can be drawn. Therefore the help of each Fellow is needed to give the action of a committee a result. It is with some such feelings as are here expressed that the Council have heard from the Secretary of the Temperature Committee that the labourers were few. Now, as I said in my last address, nothing is easier than to select one case—any case near home, and take the temperature twice in the day; with our large number of Fellows we ought to be able in a month to get 500 reports, or we ought certainly to get that number in a year, and yet your committee complains for want of workers.

May I be allowed again to observe that the benefit of such a Society as ours is not alone in attending the meetings, talking, and hearing, useful as that is, but of diffusing a spirit of inquiry in each individual member, so that the mind shall not only be prevented from falling into langour by the routine of practice, but also be stimulated to thought upon each new circumstance.

With regard to the work of the meetings during the past year, the papers are so fresh in our memory, and will be shortly before your eyes in the 'Transactions,' that comments are scarcely needed. However, I think you will agree with me that we have evidences from this source of the existence of a large amount of energy, a large power for work, a vigour of inquiry which shows there is no sign of decay. Besides, I feel assured that we have an excellent reserve force to fill up the

ranks of those who fall in the battle of life, or of those who wax feeble or faint in the fight; and thus the continuous rejuvenescence of our Society will be secured. It was a wise action of the founders of this Society that the election of officers did not depend on seniority, and thus an opportunity was made for the introduction of the active and zealous workers. Again another wise rule was made, namely, that a considerable number of the Council retires annually, and thus the assistance of these workers can be secured within reasonable time. Life, quick, fresh and, I may say, sometimes even gushing, flows through our veins. Pardon, gentlemen, this exhibition of our egotism, but it is well to consider the causes which have assisted in our prosperity, and to hold them well in view. These remarks will show you that I view the future of this Society with much satisfaction.

But yet you must remember that wise laws do not necessarily make a prosperous state. Wise laws are for the wise, and our laws are only wise in that they permit each and all of you to assist in the work of this Society. Remember that it is neither your *Presidents* nor your *Councils* that have made the Society what it is, but rather it is *each member* who, by bringing his facts and opinions before you, adds a stone to the edifice of knowledge. It was the recognition of this fact which in a measure supported me when you so kindly honoured me in electing me to fill the chair. It is this spirit which has guided me during the time I have occupied it, although but imperfectly. My object has been rather that the President should be the centre of revolution, around which should revolve the activities of the Society. Thus the force and vitality of the Society is not so dependent on what particular President you may select, but on yourselves and the manner in which you may contribute to its success. Thus much about ourselves.

To give you a *résumé* of obstetric progress during the last few years would be out of place here, but in looking back to the leading features of our advance, I think we

may discern two opinions which of late years have been gaining ground; to these I will briefly allude.

The first belongs not only to obstetrics, but also to general medicine and surgery. It is this that the chance of recovery of both our surgical and midwifery patients is in a greater or lesser degree increased in proportion as care is taken to prevent the introduction of animal poisons into their system, before, during, and after an operation or parturition. It matters not, so far as refers to the consideration of this point, whether we look upon zymotic poisons as germs, or decaying or putrescent material, but as far as our observation has led at present, the chance of recovery depends in a large degree on the power we possess in the exclusion of these agencies.

I may speak perhaps a little more decidedly than many may feel justified in doing, but as far as evidence can show, the proof which constantly comes before one is so overwhelming that I cannot refuse to believe it. What the mode of action may be is not always quite clear, because while in some cases the specific poison reproduces itself unchanged, in another it is partially modified and changed, while in a third the specific symptoms are wanting; so that in the latter forms it is perhaps yet doubtful whether the poison acts merely by deteriorating the system, or simply as a devitaliser, like as we know mental emotions can. Let this be how it is, the result is not affected, and I would add emphatically my testimony to those of my brethren in this and other branches who have already held the same belief.

It would be out of place here to discuss whether the hospitalism of the late Sir James Simpson is owing to zymosis, or to enter into the arguments how far the causes of pyæmia and zymosis are allied. But still I venture to think that although some of the arguments brought forward by Sir James may be open to dispute, yet doubtless he was right in his main assertions. The watching the influence of a wave of some zymotic disease as it flows, and again as it retires in a ward, is full of instruction. Perhaps in the

ebb it is the more so; as it becomes more weakened or diluted as it fails to kill, then the deteriorating influence on perfect recovery is well seen, and the connection between the hospitalism and the zymosis becomes more marked. Of course our knowledge is not perfect, we want the collection of histories both in wards and in private practice before we shall be able to see this subject in its fullest light. It is no answer to these assertions to say that zymosis does not always produce these results. This is admitted on all hands; every one does not contract a zymotic disease who is exposed to the influence of one; many, indeed the majority of adults, have already had one attack; and this, as it is well known, sufficiently explains why the deleterious action is not constant. It is particularly to be noted that it is not in the production only of fatal or highly serious symptoms that the effects of the influence of these poisons are to be noticed; but rather in the milder cases of slow, imperfect and interrupted recovery, and these form the larger class of cases. It is these cases which, recurring mostly at the end of a zymosis, give us the most information; and yet they are often passed out of the class altogether, and are ranked amongst the list of the disease which complicates the case most prominently.

The second opinion has of late years gained such ground that it may be said to have become established—viz. that we may lay it down as a rule that the use of instruments need not be deferred to the extent they were so years ago, and as indeed they are now by some. We may also lay it down as an established fact that a great number of the calamities which were placed against their use, really arose from delay in their use; that the swelling, sloughing, fistulæ, &c., which followed cannot be legitimately ascribed to instruments. In the majority the worst that could be ascribed to them was additional contusion, caused upon the tissues already enfeebled by long pressure. Still, at the same time, we may say that it is not intended to support an undue employment of tractors, nor undue violence in their use. Of course it is here difficult to define "undue"—some would

interpret it differently from others. Yet probably a careful consideration of the whole case according to principles indicated in the more recent works will, in general, suffice to enable the younger practitioner to judge when they may and when they must employ traction. There is one fact which leads men to postpone the use of instruments till damage is done. It is that some women go through longer labours without damage succeeding. This is true, but yet that is no reason why they should have to run risks of mischief and prolonged suffering. Relative to the use of instruments after long pressure, I may also mention that the assistance we gain in avoiding this danger by cephalotripsy begins to be more generally recognised, and I do not think I am speaking too sanguinely when I say that not many years hence we shall see the cephalotribe in a large measure superseding the crotchet and craniotomy forceps.

One can hardly cast one's eyes in retrospect without noticing the wonderful advance made day by day in abdominal surgery, particularly in ovariotomy. The last paper of Mr. Spencer Wells on this subject is a remarkable example. One cannot pass this subject without alluding to the work of Dr. Sven Sköldberg, of Stockholm, who it will be remembered by many here this evening came over to England to study the subject of ovariotomy. His success in Stockholm on his return was remarkably satisfactory. I have had a list sent to me showing that, out of 30 cases, he had 26 recoveries. So late as July last he operated. In September I had a note from his widow, informing me of his death, which took place from heart disease. Of its existence he was aware, and had taken a journey to England in the early summer, so as to rest from work and to observe our mode of practice. Those who knew him will lament the loss the profession has sustained of one who had he lived would have been an ornament to it. I may also add, that he attributed his success to the great care he took lest any septic influence should have access to his patients, and he always postponed

an operation had he been exposed to such influence. In regard to the diseases peculiar to women, we may readily discern an increasing knowledge of clinical pathology. The subject is admitted to be a difficult one, because on the one hand one cannot subject healthy persons to examination; and on the other hand, the cases being very infrequently fatal during their existence, our opportunities are rare where we can see in the dead-house the disease we have been attending; it is only occasionally we are able to compare clinical with post-mortem pathology. Hence it behoves all of us to seize every opportunity of post-mortem examinations in cases where there has been uterine trouble. It requires many workers, and the observations of each require correction by the observation of many. Hence I need hardly repeat that inquiry of this kind, involving as it does much careful, accurate, and honest research upon matters of fact and fair inference, should be undertaken in a philosophical spirit, and all differences of opinion expressed in kindly language and free from dogmatism or hurried conclusions. There is much in the human mind which tends to the contrary, as is well expressed by Sir Thomas Brown: "If Cardon saith that the parrot is a beautiful bird, Scaliger will set his wits to prove it a deformed animal. The compage of all physical truths is not so closely allied but opposition may find intrusion; not always so closely maintained as not to suffer attrition." Truth will be more surely attained by calm acquisition of facts and unbiassed arguments than by discussing a statement with a warmth which belongs more to the region of sentiment and ethics. Our work is hard; it will be harder the more we antagonise, and we require mutual aid rather than mutual opposition; at the same time it is necessary for true progress that we should constantly survey our steps, that we should from time to time take stock by full and vigorous criticism; our former opinions want constantly to be readjusted to the current knowledge. This will give us plentiful employment, and indeed this Society would fail to

sustain its high reputation if it were converted into one of mutual admiration.

I must detain you only a few moments more, to thank you for the kind support you have given me in the discharge of my duties, which have been thus rendered a source of much pleasure ; and I sincerely trust that the Society has not lost any power by any feebleness of my administration. I have to thank the Council for their kind assistance, but especially for the energetic and generous assistance rendered me on all occasions by both your secretaries, Dr. Playfair and Dr. Phillips.

A vote of thanks to the President for his excellent address was proposed by Dr. Brunton, seconded by Dr. Snow Beck and Mr. Mitchell, and carried by acclamation.

FEBRUARY 5TH, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—40 Fellows and 5 visitors.

Books were presented by Dr. Edmondstoune Charles, Dr. Hogg, Mr. A. F. Field, Professor Rizzoti, Mons. H. A. D'Espine, Dr. Georges Hayem, and the Dublin Obstetrical Society.

The following gentlemen were *admitted* Fellows of the Society :—Mr. Herbert A. Lawton, Mr. Charles Sangster, Mr. Fred. B. White, and Dr. John Williams; and the following were *declared admitted* :—Dr. H. Marcus Allen (Brighton); Dr. James Braithwaite (Leeds); Mr. A. F. Field (Aberdeen); Dr. John Walters (Reigate); and Dr. J. H. Wilson (Liverpool).

The following gentlemen were elected Fellows :—George P. Bate, M.R.C.S.; Jacob Myers Briggs, M.D. (New York); Robert Eardley Wilmot, M.B. (Harrow); Thomas Osborne Walker, M.R.C.S. (Rugby); and John Way, M.D.

And the following gentlemen were proposed for election : —Dr. John Chalmers; Dr. John Chapman; Dr. G. Julius Engelmann (St. Louis); Dr. W. B. Lindsay (Ontario); Dr. E. H. M. Sell (New York); and Mr. H. E. Trestrail (Harston).

The PRESIDENT then delivered his inaugural address.

INAUGURAL ADDRESS.

Gentlemen,—To be called upon to preside over a large body of gentlemen with whom I have been associated for many years, would in itself have been about the highest honour to which I could have aspired, but the honour is enhanced by the exceptionally high position you have given to this Society. With every feeling of respect for the Obstetrical Societies of Edinburgh and Dublin, which have done, and are still doing so much for science, I have no hesitation in saying that, on account of the number of its fellows, the value of their work, and owing to a metropolitan position, which every year brings it in more and more intimate connection with the best obstetrical men of the British Colonies, the Obstetrical Society of London has already become the highest representative of obstetrical medicine in the British Empire; and that we now stand somewhat in the same relation to Obstetrics and to Gynæcology, as the Royal Society has done to Science, since the days of Charles II. You have also vied with the Obstetrical Societies of Edinburgh and Dublin in fostering what is fast becoming a great school of British Gynæcology, second to none, if not already first.

If this high estimate of the honour you have conferred upon me impresses me with a deep sense of responsibility, you will bear in mind, gentlemen, that you share with me this responsibility, and that you are placed under the obligation to do your utmost to strengthen the honorable position we have conquered for our important branch of medicine. It would surprise a foreigner to hear me address you in this way, but you know that in our country, obstetrical medicine is still in a militant position. While in other civilised countries *all* medical students have to study midwifery and gynæcology, as well as medicine and surgery, and have all to enter the profession by one portal and then to choose out of the three paths of practice, that one which is most in harmony with individual taste; with

us, students can even now take degrees without having been questioned as to whether they understand how to conduct a natural labour, and how to treat ordinary diseases of women. We must not forget that even now the Royal College of Surgeons and the Royal College of Physicians seem to say to those coming up for examination, "We are aware, gentlemen, that two thirds of your practice will consist of the diseases of women and children, but we do not consider it incumbent on us to ascertain whether you will know how to treat them; still, if you insist on our doing so, we will get good men to examine you and certify accordingly." Let us bear all this fully in mind, gentlemen, and see what we can all do to add to the utility of our Society and thereby improve the branch of medicine we meet to cultivate.

In his annual address, our late President told us that, after deducting from the number of our Fellows, the losses due to death and to secession, we were still stronger by thirty this year than last. I do not suppose that any other medical society could say so much; but, considering the large number of men engaged in the practice of midwifery and of gynæcology, we ought not to be satisfied till we muster a much larger number of Fellows. You will understand that your Council cannot beat up recruits, and that it is for you, gentlemen, by your individual exertions, to bring into our fold all the good midwifery men who lie within your circle of influence.

With regard to our scientific work, it is satisfactory to be able to point to our fourteen volumes of 'Transactions,' and without fear of its being said that there is any falling off in the quality of the last volumes, as compared with the first; nevertheless, we should be on the look out for whatever suggestion may tend to keep up our future volumes to a high standard, so I trust you will excuse me if I take this opportunity to offer you a few hints.

In the first place I must express a regret that more *cases* are not brought before us at our ordinary meetings, to figure afterwards in our 'Transactions.' Every now and

then there crop up in everybody's practice representative cases—cases that well illustrate a mode of treatment, or confirm some theory, or show the fallacy of another. These are the cases we want, and there can be no excuse for not recording them; for although many of you have no time to write papers, all can carefully note down the particulars of a case and we ought all of us to bring ourselves to feel it to be a crime to let a little trouble interfere with the careful recording of an important one. If we did nothing in the course of each year but to well sift a considerable number of such cases and to issue them, stamped as it were with the seal of authenticity, we should be labouring most efficiently towards the intelligent reconstruction of medicine; for its imperfection undeniably depends on the deplorable inaccuracy with which cases are collected, if one can call cases, the shreds and tatters of half-ascertained facts that we so often meet with in medical works.

With regard to the substance of our future work, I think we might diversify the contents of the next volumes of 'Transactions' by occasional contributions on diseases of infancy, on diseases of lactation, and on ovarian pathology. We have had so few contributions on diseases of children that it must have escaped the memory of most of us, that this Society was founded as much to promote the knowledge of diseases of children as of diseases of women; at all events, the rapid vicissitudes of *infantile* complaints, their sudden terminations in health or in death, as well as the heavy responsibility they entail, render it desirable that papers and cases on infantile diseases should be occasionally brought before us. I am not aware that our 'Transactions' contain any notice of diseases of women brought on by lactation, and I use the word advisedly, for some women feel the disastrous effects of lactation, so soon as they begin to nurse, although most women only experience them when they nurse too long. I beg to suggest to some of the younger Fellows, that there are still problems to be worked out respecting diseases of lactation; for my part I know of no condition that so speedily drains the ganglionic

nervous system of all energy, as nursing, in some women, even when they can take abundant food and are surrounded by every comfort. The history of that overpowering debility that soon brings on extreme nervousness and a state of despondency leading up to insanity is still to be written, and it should be written by one of us, for we are in the best position to give to alienists the explanation of the not unfrequent causes of insanity that they justly refer to over-lactation.

Our 'Transactions' contain valuable contributions to the pathology of ovarian tumours and of hæmatocele, but these morbid conditions as well as pelvi-peritonitis and salpingitis are secondary diseases, which often have an antecedent and an underlying ovarian pathology of which there is little notice in our 'Transactions.' Those who may not agree with me in this will admit that all diseases of women depend more or less on pelvic diseases and pelvic lesions, and that it is incumbent on us to attempt now and then to explain to ourselves the genesis of these diseases and their relationship one to another. It so happens that I am in a position to make this attempt, if you could allow me, for once, to treat at some length of my own work, for it is now twenty-five years since I first began to discuss questions relating to ovarian pathology, at the old Westminster Society, as some of the senior Fellows of this Society will remember. Soon afterwards I published a book to show that the ovary could be a *pathological* as well as a physiological centre of action, and that many pelvic diseases radiated from the diseased ovary as from a common centre. I am able to show you that what I then taught has stood the test of time, and is now very generally admitted.

I dare say, gentlemen, you will agree with me in the foregoing observations, but I am fully prepared for divergence of opinion on my concluding suggestion, which is, that we should now seek to obtain a charter and become the Royal Obstetrical Society of London. The project has been already mooted, and I think it is now ripe for execution. You will please to understand that I only

give you my individual opinion; the Council may not adopt it, so it may not have to be submitted to your approval, and if I broach it now, it is in order that the Council may gather your opinion on the matter, and decide in accordance with your wishes.

It may be said, in opposition to this proposal, that our sister societies of Edinburgh and of Dublin have done very well without a Royal Charter, and that it is not worth while spending two hundred pounds on a mere name. I think, on the contrary, that there is a great deal in a name, that many more medical men would join us if we were a Royal Society, that it would strengthen the position of Obstetric Medicine, and give weight to our requests, if we should have again to go to Government on matters connected with our branch of medicine. When, some years ago, I went up with a deputation from this Society to Mr. Bruce, about the better education of midwives, I was very much amused at the time it took to make him understand who we were and what we wanted. It never seemed to have occurred to him that as women were the larger half of the human race and had to bring children into the world, they might possibly require the main attention of a large body of the profession. I think that even the official ear would listen more attentively to us, if our utterances were those of a chartered body; and with regard to our doing what the Edinburgh and Dublin Obstetrical Societies have not done, I shall only say that our metropolitan position justifies a claim to somewhat higher rank. I therefore think that to obtain it, would be to the benefit of the Society and of Obstetric Medicine. It would, at all events, familiarise the profession with the fact, that although, as a science, medicine is absolutely one and indivisible, it must ever be divided for practical purposes in populous countries, into medicine, surgery, and obstetrics, the only three divisions of the healing art that are coequal in importance and in dignity.

These are my suggestions, gentlemen, and even if you cannot fully adopt them, I feel confident that I can depend on your cordial support to carry out the duties you have

called me to, and with the aid of the intelligent officials with whom you have associated me, I trust I shall be able to hand over the office to my successor with unimpaired lustre.

Dr. Barnes exhibited a recent specimen of a dermoid cyst. There was a history extending over six years. Death had apparently been caused by peritonitis. The sac of the dermoid tumour was in parts very distinct; elsewhere closely connected with a mass of peritonitic effusion. It contained hair.

DESCRIPTION OF A CYCLOPEAN MONSTER—A WAX MODEL OF IT EXHIBITED.

By J. Ashburton Thompson, L.R.C.P. Lond.

Mr. Thompson said,—I lay before you a model in wax of the head of a monster belonging to St. Hilaire's order of cyclocéphaliens.

The mother is thirty years of age. She has had two natural labours at full term, when she produced healthy children. She enjoys good health, is of good family history, has never miscarried; and neither upon her side nor upon her husband's (who is himself a healthy man) has there ever occurred any monstrous birth. The model is one of the result of her third confinement. The menses made their appearance last before this pregnancy on the 22nd of December. During the night of the 22nd of February

following, and before she knew that she was pregnant, her home took fire, and she and her family were hurried in their nightdress across the road to a neighbour's house. Here she says she experienced some kind of fit—perhaps fainted. From that time till the 19th of July, when she was confined, she continued to feel ill, doubting whether she would fulfil her term of pregnancy. After the date of quickening she noticed that she was of unusual size, and when, at the twenty-sixth or twenty-seventh week, I was summoned to attend her, she discharged, on the rupture of the membranes, from fourteen to sixteen pints of liquor amnii. An excessive quantity of the waters being a not unusual concomitant of monstrous births, and being acquainted with the history related, I inquired cautiously if she expected any deformity of her child, and found that she did not. The labour proceeded in an ordinary way. At birth the child was alive and vigorous; it cried lustily, though with an intonation of voice quite distinct from that of a normal child; and the skin soon acquired its proper brilliant red. I left it almost expecting it to live; but was told on my next visit that it survived but an hour and a half. The placenta, cord, and membranes presented no unusual appearance to the eye; but they were not examined microscopically.

The body was that of a female child of seven months at least. In conformation it was well developed and normal in every respect except the head, and here again the deformity is entirely limited to the eyes and nose, and the bones immediately connected with the latter. There is no cleft palate or even harelip; but the nasal bones are deficient, the two orbits make a common recess, and the two eyeballs are joined together.

In fusion of two organs each organ retains that form which it had at the moment of contact; each of these globes is perfect, and is joined to the other globe only by a continuation of its outermost layers; and each has its proper optic nerve. They must, therefore, have joined each other at a late period of their development. The lids, too, run into each

other, terminating in the median line below in a proper caruncle, while above the two segments unite to make a common lid almost well formed and not interrupted in the centre. Externally each angle has again almost a normal conformation. Exactly in the median line above the upper lid and not interfering with it, is situated the displaced and rudimentary nose. It bears a strange general resemblance to a penis, which is enhanced by a central depression and canal, from which some drops of yellow secretion exuded. It is about three quarters of an inch in length, of an oval shape, truncated, and at its extremity about three eighths of an inch in vertical diameter by half an inch in the transverse. It is composed of cellular tissue, and is supported, one half of it on the edge of the orbit, the other on the tissues with which that cavity, not quite filled by its abnormally disposed contents, is packed. The canal penetrating it is only a *cul-de-sac* of a diameter just sufficient to admit an ordinary probe for three eighths of an inch, and it does not betray the source of the yellow fluid it exuded so freely. The scalp was well furnished with hair, which, for the purpose of modelling, it was necessary to shave off; and the swelling noticeable in the model over the left frontal region is to be attributed to a post-mortem congestion. I extremely regret that the original specimen is not before you; but I had dissected it, to a certain extent, with a view of modelling some of the internal arrangements, and the exposure during very hot weather which this involved rendered it almost valueless for preservation.

I may add that an account with drawings of a very similar deformity occurring in twins is related in the seventh volume of the Society's 'Transactions' by Mr. Ellis, of Newcastle-on-Tyne; and descriptions of this kind of deformation are to be found in many of the very numerous teratological works and papers, more especially in G. Isidore St. Hilaire's systematic treatise, and in Vrölik's special contribution on it to the fifth volume of the 'Transactions of the Royal Netherlands Institute.' But a very complete though succinct review of its various degrees is to

be found in Paget's article "Nose," in Todd's 'Cyclopædia of Anatomy and Physiology.'

The model will be added to the Museum of the Society.

Dr. Routh exhibited to the Society an Écraseur made by Krohne and Sesemann. It appeared to have three advantages :—

1st. To enable the operator to fasten the ends of the wire simply and strongly by means of a new stage. In using ordinary écraseurs there was great inconvenience and difficulty in fastening the wire. The loops usually made often broke, but when the single *steel* wire was used attachment was often impossible. The stage consisted of two fixed parallel plates, in the centre of which was a movable one. Two holes were made in each, which when the plates were in a certain position were exactly opposite to one another. Through each of these so oppositely placed one end of the wire was placed. By means of a long key the inner movable plate was screwed up or down, and in this manner the wires were effectually tightened, the holes being no longer opposite. In addition, by turning the projecting bit of wire downwards it was immovable. The principle by which it was fixed was the same as that adopted in his (Dr. Routh's) clamp for perineal cases and figured in a former volume of the Society's 'Transactions.'

2nd. But this stage was not a solitary one. There was another just like it higher up in the instrument, lodged in a recess above the screw, so that when the first had used up a large portion of the wire and come down to the bottom of the écraseur, by cutting the wire below it might again be reapplied to the upper stage and go on as before. In this way a very large tumour might be cut through where the travelling of the stage downwards once did not suffice. It obviated the necessity of winding up the wire, which was nigh to impossible when stiff steel wire was used in an écraseur.

3rd. In the case of the wire breaking at any point inter-

mediate between the tumour and the first stage used, the wire could at once be applied to the second stage, and so the operation go on without interruption.

CASE OF DELIVERY BY THE FORCEPS IN FACE PRESENTATION IN THE MENTO-LATERAL POSITION.

By J. Braxton Hicks, M.D., F.R.S.,

LECTURER ON MIDWIFERY AND PHYSICIAN-ACCOUCHEUR AT GUY'S HOSPITAL, ETC.

The cast of which I beg the Society's acceptance I had taken from the head of a fœtus delivered under the following circumstances.

When I was called to see her, the mother had been in full labour for twenty-four hours; the face presented, and it had been driven down partly into the cavity of the pelvis, but without any advance for the last eight hours. The os uteri had receded from the face excepting in front, where it was to be readily felt. The pains had for eight hours been severe, the pulse was rising, and the tongue becoming dry. The vertical diameter of the face was exactly in the transverse diameter of the pelvis; the chin to the left side. I applied the long curved forceps in the antero-posterior diameter of the pelvis, which required some care, for the space between the head and the symphysis was barely sufficient for the blade to pass. This difficulty was overcome, however, by pressing up the head, and injury to the soft parts was prevented by guarding carefully with the fingers, which also were employed to press back the head towards the sacrum. During traction attempts were made, as much as I considered safe, to direct the chin forwards so as to imitate nature, but without effect. As I found that, notwithstanding

the transverse direction of the chin and the forehead, the head descended without much difficulty, I continued traction, but not without a final attempt at rotation of the chin forwards. However, in this I was unsuccessful, and the face emerged from the outlet as it had entered the inlet, the chin to the left tuberosity of the ischium and at the centre of the left side of the vulva.

This is, therefore, another instance that in face presentation it is not always that the chin turns to the symphysis pubis; and that it is not advisable in every instance of face presentation to blindly insist on imitating nature in ordinary cases when using the forceps. It is more than probable that in this case, as in those cases I formerly described in this room, the pelvis varied from the usual type. The rule that, in traction, we should rather *follow* nature's indications than direct them, holds equally good in these cases as in vertex presentations.

The shape of the head after delivery, as shown by the cast, is worthy of note. The occipital bone is driven underneath the parietes; and the vertical diameter is not particularly reduced. This impression was doubtless done by the neck and back, which was at the time of passing in a very different position to that shown in the cast, where the long axis of the child is restored to the natural condition. It would be difficult to say how much the uterine action produced the pressure, or how much the traction. I think that the traction had most to do with it, as the principal pressure would be exerted as the head came down well into the cavity and through the bony outlet, aided by the softness of the tissues in consequence of the death of the child, yet in the traction I was not conscious of putting forth any great amount of power.

A CASE OF CEPHALOTRIPSY, WITH SHORT REMARKS. CAST OF FŒTAL HEAD EXHIBITED.

By J. Braxton Hicks, M.D., F.R.S.,
LECTURER ON MIDWIFERY AND PHYSICIAN-ACCOUCHEUR AT GUY'S HOSPITAL.

The mother had been in labour fifty hours, and when I was called in, the child was decomposing. The mother had a pulse of 150 per minute, dry tongue, sordes on teeth, was scarcely able to answer questions, and the uterus was in a state of continuous action, as hard as it was possible for it to become. The os was dilatable, but the narrow antero-posterior diameter of the brim of the pelvis prevented the head from entering the cavity of the pelvis, and the os uteri from being distended.

I perforated, placed on the cephalotribe in the transverse diameter, employed one crush, rotated the head a quarter turn, and employed slight traction. The delivery was accomplished in a few minutes almost by the uterine extrusion. The whole affair did not occupy more than five minutes.

I have examined the brim of the patient's pelvis since, and find it to be about three inches in the conjugate. This is of course not a severe contraction, and the case is not cited as an instance of what the instrument can effect in extreme cases. But it shows that in the intermediate reductions of the pelvic diameter a large amount of time and labour on the part of the operator is saved, and a proportionate amount of irritation, and possibly danger and damage, on the part of the patient.

I may also briefly allude to the state of the uterus, which illustrated in a marked degree the observations I once made here in a paper on the meaning of so-called powerless labour; the pains had long gone off, but contraction had not, on the contrary it was intense. As I remarked also in that paper,

in such cases there is very little, if any, fear that flooding will occur from inertia, because the uterus continues active for a long time, and indeed the placenta may be held fast by the over-action.

So much for the labour itself. Let me briefly bring before you the points of interest.

The instrument I employed was that which I have already shown here, and which is now before you. The extreme width of the closed empty blades (outside measurement) is just one inch and a half. The width of the same part, the head being enclosed, is just the same, so that practically the presence of the head has little influence on the action of the instrument. When I say little, I must point out a feature in the action of the instrument; namely, that when the screw is used, and the incurved ends of the blades are firmly adpressed, the distance which separates the blades is reduced a little. But passing by this almost imperceptible point, it is clear that it is sufficiently strong, and is sufficiently narrow for all the demands of delivery; because if, as I have also before remarked, the pelvis will not permit this reduced size to pass, assisted by a slight tilting, it is clear that the case is not suitable for delivery *per vias naturales.*

The deep indentation which is shown in this cast is worthy of notice, because it shows the advantage of keeping the instrument on whilst drawing down. If the blades were taken off, the indented part would expand and the thicker uncrushed part, which is now two inches in diameter, would expand half an inch and thus the advantage of crushing be much reduced.

I must apologise for the roughness of the cast, which I took under difficulties as soon as I arrived home, and before the instrument had been disturbed. It will, however, suffice to illustrate the remarks just made.

Dr. Harris mentioned that he had used at the Government Lying-in Hospital, at Madras, with complete success in several

cases of minor deformity of the pelvis, an instrument which was shown to him several years ago by Dr. Edmonstoune Charles, of Calcutta, and named the Calcutta craniotrix. In shape the blades of the instrument he referred to resemble the ordinary forceps more than the cephalotribe, and consequently their crushing power was not so great; but he believed the instrument to be somewhat easier of application, and it was proved to possess ample power for the compression and extraction of the head after perforation in cases where the deformity of the pelvis was even greater than that referred to by Dr. Braxton Hicks.

Dr. J. J. Phillips felt convinced that the cephalotribe would come into much more general use than at present in England. He considered Dr. Hicks' instrument a most efficient one. The original pattern of Dr. Hicks' cephalotribe was, he thought, rather short, and he had experienced some difficulty in delivering with it from above the pelvic brim; but the cephalotribe as now made was very manageable and powerful enough for all that was required of it. He pointed out the advantages of the cephalotribe in cases of face presentation when the chin remained posteriorly, and quoted a case of the kind to which he had lately been called, in which after prolonged and violent uterine action the face was found impacted low down in the pelvis, with the chin directed backwards, and no progress could be made with the forceps. In this case after perforation and one crush the child was speedily extracted.

Dr. J. Braxton Hicks thought it best by far to have an instrument equal to any demand. Nothing could be more unpleasant than to find one's tools too weak for the requirement of the case. The instrument he used he found very easy of application, and he had used it frequently without an assistant.

A CASE ILLUSTRATING THE TREATMENT OF POST-PARTUM HÆMORRHAGE BY THE INTRA-UTERINE INJECTION OF THE PERCHLORIDE OF IRON.

By Heywood Smith, M.A., M.D. Oxon.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN AND THE BRITISH LYING-IN HOSPITAL.

The injection of a solution of the perchloride of iron into the uterus with the view of stopping hæmorrhage when it is very severe, both in the unimpregnated as well as in the puerperal state, is now so generally advocated, that it becomes our duty to report any cases, whether favorable or otherwise, that have any practical bearing on so important a subject.

Knowing well the occasional utility of the remedy, I yet venture to think the narration of the following case may not be without its lesson, as showing that circumstances and conditions might exist which in some cases would contra-indicate its use.

The result of the case shows the effect the iron has on some of the tissues with which it comes into contact, and I trust the discussion upon it may tend to a more careful selection of the cases fitted for the intra-uterine injection of iron.

Case.—A. C—, æt. 30, was admitted into the British Lying-in Hospital at 2.30 a.m. on Friday, January 26th, 1872, in labour with her fourth child. Her previous history, as far as could be gathered, was, that she had been married twice; by her first husband she had two children, besides two miscarriages, with both of which latter she had severe flooding. After her second marriage she had two more miscarriages, also with severe loss, the last one, which immediately preceded the labour for which she was admitted, being so serious that she was compelled to keep her bed for four months.

Her health between her pregnancies was reported as pretty good.

Jan. 26th.—She was delivered naturally by a pupil midwife at 4.20 a.m. of a living male child, twenty inches long, weighing 8 lbs. 14 oz. after a labour of twelve hours' duration. The placenta came away easily in twenty-five minutes, not more than the usual amount of blood being lost.

27th.—Patient was doing well.

28th (3rd day p.p.).—The patient awoke at 3 a.m. with severe pain in the hypogastrium. Bowels not yet open. Lochia natural, not offensive. The milk came yesterday afternoon. From this time the lochia became rather scanty.

Feb. 1st (7th day).—Was moved in a chair down stairs; was not out of bed before nor since.

4th (10th day).—Yesterday morning some hæmorrhage occurred with slight pain, and this morning she passed several clots. Nothing had happened to account for the bleeding. 6 p.m., P. 76; tongue clean. Has had sixty grains of ergot of rye. *Vaginal examination.*—Os uteri very patent as far as the inner os, bleeding. Ordered thirty grs. of ergot every four hours.

5th (11th day).—*Vaginal examination.*—Os uteri not so patent. It lies high up and backwards. There was very little pain after taking the ergot. Bleeding continued yesterday till evening, and commenced again this morning. The vaginal tube of Higginson's syringe was passed into the uterus at 4 p.m., and a solution of one part of strong Liquor Ferri Perchloridi to eight parts of water injected.

10th (16th day).—The hæmorrhage was reported not actually to have ceased, but though lessened some discharge of blood still continued. The uterus was again injected with a solution of the perchloride of iron.

12th (18th day).—Hæmorrhage recommenced last night, patient becoming blanched; the uterus injected with iron, one in four.

14th (20th day).—Uterus again injected with equal parts of the Liquor Ferri and water. No bad symptoms followed any of these injections; the hæmorrhage, however,

recurred. The appetite and spirits were both good, the patient had no pain and slept well.

15th (21st day). 11 a.m.—Strong Liquor Ferri was injected into the uterus with an intra-uterine syringe holding about two drachms. From that time till the evening she rolled on the bed with severe pain, which was referred to the fundus uteri as being sharp. She said she felt as if something had been torn out of her; was relieved by poultices. There was no more hæmorrhage after this injection.

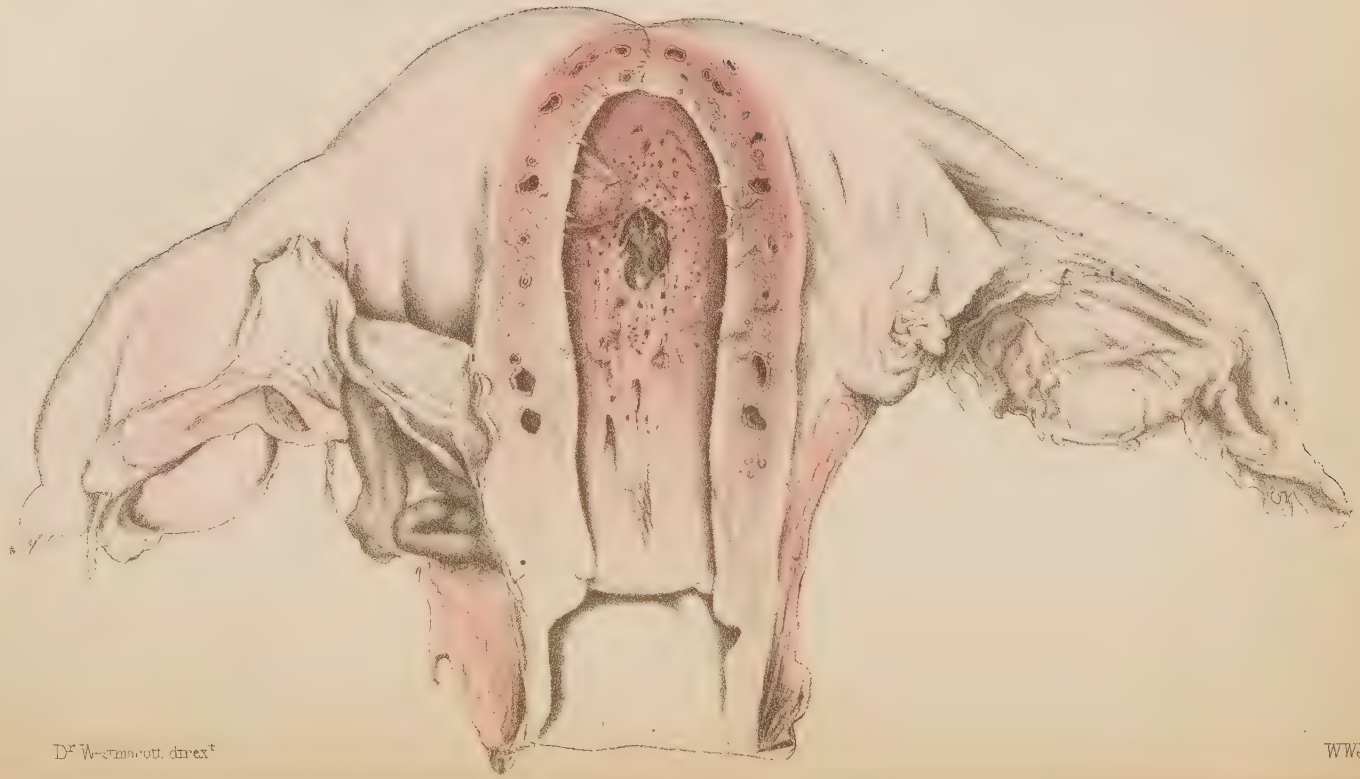
8.30 p.m. Has been violently sick; P. 136. Brandy and ice.

N.B.—I may here remark that the hæmorrhage on no occasion amounted to a flooding, but oozed continuously, ceasing, however, after each injection, and recurring generally only a short time before the injection was repeated, which the very occurrence indicated. It is also quite worthy of notice that the colour of the blood was bright red, never dark.

17th (23rd day).—12.45 p.m., P. 140, full and weak. Tongue dry and white at the sides. Is feeling very weak, but in no pain. Slight coloured discharge. Bark and ammonia with opium. 11 p.m., P. 160; T. 104·3°; R. 32. Tongue dry in the middle, moist at the sides. Abdomen distended; vomits everything. Has been delirious this afternoon and evening. No bleeding per vaginam, but a discharge brown and offensive. A mixture of soda and hydrocyanic acid, with one minim of tincture of aconite, every half hour.

18th (24th day).—11 a.m., P. 148; T. 104·1°; R. 24. Tongue moister, abdomen still distended. Is not in so much pain. Has not been sick more than once, and not at all after the second dose of the hydrocyanic acid mixture. 10 p.m., P. 140; T. 103°; R. 24. Abdomen softer. Has had seven or eight full evacuations. Has slept a little. Has been free from sickness all the day until just now.

19th (25th day).—9 a.m., P. 148; T. 103·2°. 3.15 p.m., P. 168; T. 105·4°. Tongue darkish. Takes her food well. Bowels have acted, motion not relaxed. Occasionally



Dr Westmacott dirext

W West & Co lith.

1/2 size

DESCRIPTION OF PLATES I & II.

PLATE I.

Anterior view of the uterus divided in the median line. Near the right corner of the uterus is seen the retained portion of placenta; and in the centre of the body the excavation into which the portion of placenta fitted. In the section of the walls are seen the uterine sinuses stained with iron. At the inner edge of the broad ligament, on the right side, are seen some uterine veins similarly stained; the soft tissue lining the excavation is also seen, stained black. Projecting from the lining of the uterus, from the edges of the walls in section, and also from the excavation on the posterior wall, are represented the small uterine arteries white.

PLATE II.

Posterior view of the same uterus, showing uterine sinuses in section filled with black stain.

experiences great dyspnœa. Is in no pain. Coughs and expectorates froth. Picks at the bed clothes. 11 p.m. Is in a cold sweat, apparently sinking. Brandy ℥viij.

20th (26th day).—8 a.m., P. 176 ; T. 105°. 10 a.m., P. 152 ; T. 105·1° ; R. 52. Tongue moister and cleaner. Abdomen soft. Is in no pain. Slept in the night. 2 p.m., P. 144 ; T. 102·4°. 6 p.m., T. 103·4°. 10.15 p.m., P. 160 ; T. 103° ; R. 48. Tongue dry in middle, moist at sides. Has had 10 oz. of brandy, ale Oj, some fish, a little meat and some beef tea.

21st (27th day).—8 a.m., T. 101°. 10 a.m., P. 144 ; T. 99·4° ; R. 36. Tongue moister. Has been very delirious and violent. Did not sleep. 6 p.m., P. 160 ; T. 103·8°. 11 p.m., P. 140 ; T. 101·2° ; R. 44. Tongue moist. Has not been sick since the morning. Right eyelid swollen. Urine high coloured. Diarrhœa since 2.30 p.m.

22nd (28th day post partum and 7th of attack).—8 a.m., died.

In passing, I would draw attention to the fact that, on the evening of the 19th of February, she was in a cold sweat, and to all appearance sinking fast, with a temperature of over 105° F. ; that the next day she had improved and the temperature had sunk to 103°, and the following day (the day before she died) to 99·4°, though it again rose in the evening ; showing a fall in twenty-four hours of six degrees.

I had the uterus removed, and two drawings made of it, one of its anterior, the other of its posterior aspect. Dr. Snow Beck has kindly examined this uterus with me, and I take this opportunity of acknowledging how much indebted I am to him both for the dissection and its description.

The uterus was nearly five inches long, nearly four inches broad, and the thickness of the walls of the body $\frac{3}{4}$ in. Both its anterior and posterior *surfaces* were marked with blackish streaks, evidently indicating the course of the uterine sinuses. The *tissue* was soft but otherwise apparently healthy. The *cavity* was laid open by an incision through the anterior wall, dividing many of the *sinuses*. These were

seen to be filled with a black fluid, and their walls were stained dark. The *arteries* were distinctly seen, and from the cut surfaces many hung as fine white shreds, some of which could be traced to an abrupt termination, open on the inner surface of the uterus. The *inner surface* was covered with a dark reddish-black fluid, and at the junction of the upper third with the lower two thirds, and in the middle line, was a depression stained black, $\frac{5}{8}$ in. $\times$ $\frac{4}{8}$ in., and about $\frac{1}{8}$ in. deep, its edges somewhat irregular and sharp. From near the centre of this depression an artery (apparently one of the curling arteries) hung out more than $\frac{1}{8}$ in., and near its circumference there were some other fine arteries, with torn extremities. In the soft tissue surrounding this depression, the locality of the placental attachment, were numerous white spots, which on being teased out were found to be broken ends of arteries. Below the depression were some small irregular patches or excavations of slight depth, some of which contained an artery in the centre. At the right angle of the uterus, about midway between the depression and the uterine orifice of the oviduct, was a roundish mass of soft tissue about the size of a small filbert, which, when the uterus was intact, evidently fitted the depression just mentioned and pressed into it. This was proved to be a portion of placenta. The place of the placental attachment was marked by a slight elevation of surface, which was covered with small reticulations, and freely dotted, as well as the part immediately surrounding it with small black points which were traced to the sinuses beneath. The rest of the inner surface was natural, as was also the cervix and os uteri, and the vagina.

The posterior wall of the uterus, being divided longitudinally on each side, was seen to be freely traversed by the divided sinuses filled with black fluid; and these on dissection were found to lead towards the inner surface of the uterus, and to end in the small black points before noticed. The veins at the sides of the uterus were also stained dark, and filled with a blackish fluid, thicker than that found in the uterine sinuses.

Dr. Westmacott direx.

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½ size

The microscopical examination showed the contractile fibres, taken from the depression on the inner surface, stained quite black, without fatty degeneration, with granular matter but slightly stained between the bundles. The contractile fibre-cells themselves varied in size, and had their ends truncated. Portions from the small soft ragged patches were found to consist of soft tissue broken down, consisting of amorphous granules, some of the round and oval cells, and some

Contractile fibres with truncated ends from the depression on the posterior wall of the uterus; stained black, interspersed with granular matter less stained.

contractile fibres. Some spots of soft tissue were stained reddish brown. A small portion of the end of a free artery showed the free (*i. e.* uterine) end slightly puckered, the margin rounded, and the canal unobstructed. The walls were thin, with some soft tissue attached.

It only now remains to sum up very briefly what the minute observation of this case seems to teach us:

1. That post-partum hæmorrhage happening after complete contraction of the uterus, and therefore after the uterine sinuses have been emptied of blood, is evidently arterial:

2. That when a solution of the perchloride of iron is injected into the uterus the sinuses take it up and carry it

into the veins; the tissues also immediately surrounding the sinuses becoming stained:

3. That the perchloride of iron does not produce contraction, nor, by coagulation of blood, blocking of the orifices of the uterine arteries: and,

4. That the perchloride of iron is a styptic the use of which in the cavity of the puerperal uterus is not innocuous.

Dr. Routh thought great credit was due to Dr. H. Smith for bringing forward this unfavorable case. He also had suspicions that the injection of iron was not so innocuous as believed, although upon the authority of Dr. Barnes, who was known as a high obstetrical authority, he had also adopted it. Some time ago he had attended a lady who always lost a large quantity of blood at her confinements. Indeed, in both previous labours she had well nigh died from flooding. When he (Dr. Routh) attended her she flooded as usual, and all the usual means employed, ergot, ice, keeping the hand for hours on the uterus, failed. So soon as the hand was removed the uterus enlarged itself, and the hæmorrhage recurred. In this dilemma he had used a solution of the tincture of steel and water in equal parts. It checked the hæmorrhage effectually, and as the greatest care was taken to prevent air from being admitted into the syringe it was hoped all would go well; and all did go well till the third or fourth day, when puerperal fever set in; and, although Dr. Barnes saw her with him, and the uterine cavity was itself again injected with carbolic acid 1 in 60, in case there might be any putrid matters retained in utero, she died. Now, Dr. Routh did not say the death was due to the injection, but it might be, and this case had therefore rather frightened him as to its use again. In Dr. H. Smith's case, however, we had not exactly to do with post-partum flooding, as it took place as late as seven days after labour. In such cases it was quite safe to inject the pure tincture or the liquor if, according to Dr. Savage's plan (which he, Dr. Routh, had brought before the notice of the Society, giving Dr. Savage due credit for it), the uterus was previously dilated by sponge or sea-tangle tents. He gathered from the narration, however, of Dr. H. Smith's case that the os uteri was not fully dilated. The paper had stated there was a constriction at the inner os, and no mention was made of the complete escape of the fluid injected. On the contrary, from the character of the pain referred to the fundus only, perhaps some had been retained there. If so, these symptoms might be due as much to retention of fluid within the

uterus,—exactly as sometimes occurred in a non-dilated uterine cavity in the unimpregnated state and giving rise to peritonitis,—as to the nature of the fluid injected.

Dr. Graily Hewitt stated that he had seen one case where the perchloride of iron injection had been used to restrain hæmorrhage and the patient had subsequently died. The patient was healthy and had had a tolerably good labour. Hæmorrhage first occurred some time after the placenta had been normally removed, and the uterus had apparently taken on permanent contraction. The hæmorrhage was severe, and recurred in spite of the ordinary remedies. A solution (one in four) of the tincture was injected and restrained the bleeding, and for three days the patient was quite well. Pains then set in, the lochia became arrested, and puerperal peritonitis set in followed subsequently by other grave complications. Death occurred about five weeks after delivery. In this case the patient's life was saved by the injection. Whether the subsequent results were in any way due to the action of iron was a question which he had felt himself unable to decide. At all events, in certain cases it appeared that the hæmorrhage could only be restrained by its means. He would take occasion to remark that he had hardly ever seen serious hæmorrhage to occur when the uterus had been systematically watched from the moment of delivery, but the time necessary to expend in guarding the uterus from relaxing varied in different cases, and occasionally exceeded an hour.

Dr. Murray wished to add his testimony as to the value of the perchloride of iron. He had used it in ten cases which he could call to mind within the last few years. One was that of a lady only sixteen years of age. Forceps had been employed, and hæmorrhage came on nearly an hour after delivery; the iron solution was used with success twice. In another case the shoulder presented, delivery was effected by turning, the placenta had to be removed, hæmorrhage resulted from complete inertia of the womb; the iron was used with perfect success. In five other cases it was used without hesitation, and with good results, after the various ordinary means had been tried and failed to arrest the hæmorrhage. In the other three cases the patients certainly died after the uterus had been washed out with the solution of iron, but most decidedly this had nothing whatever to do in causing death; indeed, it might have saved these lives had it been at hand and made use of earlier, for at the time when these cases were seen two of them were moribund, and all died from within half an hour to three or four hours after the injection had been made. He considered the delay in not using the iron far more dangerous than the employment of it.

Dr. Braxton Hicks also considered this case one of great importance. He thought the previous speakers had not alluded

to the principal points of the case itself. In the first place it must be remembered the strongest Liq. Ferri Perchloridi was used. Now this was too strong for the interior of the uterus; it was as much as the vagina could bear, much less the cavernous and softer structure of the uterus; the result described he should have expected from this strength of the solution. In the second place it might be held as a rule that when an abortion had occurred and hæmorrhage was persistent we might always conclude that a portion of ovum or decidua remained attached to the inside of the uterus. If this were at all severe it was always the best plan, if the uterus were not sufficiently open, to tent up the cervix, and remove the portion unless it were found to be too firmly adherent. In either case the interior of the uterus could be swabbed out with a milder solution of perchloride of iron, and danger thereby avoided. As all had been invited to give their experience in the use of the perchloride of iron, he said that he had employed it a great number of times, and had made inquiries largely amongst those who had, without having seen or heard of any serious result; on the contrary, since he had used it he felt a degree of security in a case of hæmorrhage which he did not feel formerly, and he was much indebted to its introducer. The only case he had seen any trouble at all was one in which severe flooding after twins had occurred, and to save life it was injected with complete restraint to the loss, but pains arose after twenty-four hours, and it was found that the uterus contained hard blackened coagula which the uterus could not expel. These were broken up by the finger and injections of water, and the patient did well. But he further remarked that before we could blame the remedy in question we must be careful to see whether the pyæmia resulted from it or from the depression in consequence of the severe hæmorrhage. It was by no means an unusual thing for him when called in to cases of puerperal fever to find the history of flooding; and, therefore, before we could settle that question we must compare the results of severe cases of flooding treated without perchloride of iron with those where it was used.

Dr. E. H. M. Sell, of New York, said he desired to speak a few words which might have a tendency to remove any fears that some present might cherish after some of the remarks that had been made; and as the author of this treatment was present, he desired him to feel that he had by no means introduced a bad treatment. He then stated that his experience was obtained at the University of Vienna, an institution which could boast of from 7000 to 9000 deliveries annually. His personal observations embraced a space of eleven months, by day and by night; and for a considerable time the injection of perchloride of iron in post-partum hæmorrhage was *the treatment* upon which they relied at Vienna, provided ergot and the injection of cold water did not

produce contraction of the uterus and arrest the bleeding. The mode of the application was as follows :—A large crooked cannula, with several openings at one (uterine) end, was introduced into the uterus, held by one hand, and by means of a syringe holding eight ounces, a weak solution of the sesquichloride of iron (ʒj ad Aq. lb. j), of the colour of sherry wine, was gently injected and repeated till the hæmorrhage ceased. He said that he had *never* seen any bad results from this treatment ; that a few cases which did badly, in spite of the treatment, were due to the loss of blood.

Dr. Playfair said that he should much regret if the case brought before the Society should have the effect of throwing doubt on the safety of astringent injections in severe cases of post-partum hæmorrhage. Dr. Smith's case scarcely seemed to him a fair illustration of the treatment, for it was a case of secondary hæmorrhage caused by the presence of a piece of retained placenta, and the strong undiluted Liq. Ferri Perchloridi had been injected, a proceeding which Dr. Barnes had not sanctioned. The same objection could be made to the case related by Dr. Routh. In neither of them was there any evidence to show that death arose in consequence of using the injection. They both seemed to be cases of septicæmia. One could readily understand why septicæmia should more readily occur in patients enfeebled by hæmorrhage, and thus rendered more easily susceptible to septic influences, but not why the injection should cause the symptoms several days after being used. It should be remembered that Dr. Barnes's method was not recommended by him for indiscriminate adoption in all cases of post-partum hæmorrhage. It was strictly confined to those severe cases in which it was found impossible to control the bleeding by rousing uterine contraction, and then only when other means had failed ; and for these it was invaluable, inasmuch as it was the only one of its kind. He (Dr. Playfair) had used it in many cases, and only once unsuccessfully. Nor had he ever seen any evil consequences. Any bad results from it he would rather expect, speaking theoretically, to arise from coagulation of the blood in the systemic veins, such as have been said to have occasionally followed the injection of the perchloride into aneurismal sacs. But no one had ever observed anything of the kind. We might as well object to the use of chloroform or opium or any other remedy because evil consequences sometimes followed their administration, and he trusted this would still maintain for itself the place it had gained in obstetric practice.

Dr. J. J. Phillips, while admitting that there were certain dangers connected with the injection of a solution of perchloride of iron into the uterus, felt bound to say that no statement which

he had heard that evening seemed to him any valid argument against its use in suitable cases, and when employed with the usual precautions. During the last three years he had been obliged to resort to the injection in several cases, and he could remember only one case which had a fatal issue. This he thought was good evidence in favour of the perchloride when the serious nature of the cases in which it was used was remembered. He had used it only in hospital and in consultation cases, and in the one fatal case he could not in the least degree connect the death with its use. The case was seen with two experienced accoucheurs, the patient's condition was one of imminent danger, and it was the opinion of all that after the severe hæmorrhage which had occurred the continuance of the oozing, which was going on notwithstanding the use of all ordinary means, must lead to a fatal termination. The iron stopped this oozing, and although the patient died in eight or nine days with the usual symptoms of puerperal septicæmia, there was no evidence at all that the iron had any share in its production.* Every one must admit that severe post-partum hæmorrhage by itself predisposes the patient to various puerperal ailments; and, moreover, the perchloride was used only in cases where all other means of arresting the hæmorrhage had failed, and which would presumably terminate fatally at the time but for its use. He deprecated its employment as an ordinary means of arresting hæmorrhage after labour, nor could he agree with some preceding observations as to the usefulness of a very weak solution of iron as an injection into the uterus. A very diluted solution was not powerful enough to stop the bleeding in the desperate cases in which iron was indicated. Not long ago he was called up to a case of secondary hæmorrhage in which a weak solution had been tried without much effect, but a stronger one immediately stopped the hæmorrhage, and the patient recovered without interruption. He generally diluted the Liquor Ferri Perchloridi (not the strong one) with about half its bulk of water. He had not noticed any complaint of severe pain after the use of the perchloride, but he admitted that the case before the Society furnished conclusive proof that such pain might be produced by a very strong solution. Dr. Barnes had always insisted on the necessity of removing every portion of the ovum before using the perchloride, and the importance of this could not be doubted; the retention of a portion of the placenta may of course in any case have a more or less direct relation to the cause of death. Dr. Phillips, looking back on his experience with the perchloride, could not help regarding it as a most valuable remedy. There was another

* The speaker has since called to mind a case of placenta prævia which he saw in the country, in which the patient died after labour, notwithstanding the use of the perchloride.

interesting point in Dr. Heywood Smith's case, viz. that there did not seem to have been any hæmorrhage until the tenth day. He had last month been summoned to a case in which there was no hæmorrhage at all until the twenty-first day after labour, but after a little exertion on that day it came on so severely as to reduce the patient to a state of extreme exhaustion. Notwithstanding this long delay in the supervention of the hæmorrhage a substance about the size of half a crown was by the finger peeled from the inner surface of the uterus, and it had the structural appearance of a portion of vascular placenta. In November, also, he had removed from the uterus in another case after dilatation, three months after labour, a portion of placenta which had given rise to no hæmorrhage until five weeks after the birth of the child.

On the motion of Dr. Snow Beck, seconded by Dr. Barnes, the discussion was adjourned to the following meeting.

MARCH 5TH, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—53 Fellows, and 17 visitors.

Books were presented by Professor Guiseppe Albini, Mr. Alfred Higgenson, and the Edinburgh Obstetrical Society.

The following gentlemen were admitted Fellows of the Society :—Dr. J. M. Briggs (New York) ; Dr. T. C. Hayes, and Mr. Robert Eardley Wilmot ; and Mr. H. R. Hatherley (Nottingham), and Mr. T. O. Walker (Rugby), were declared admitted.

The following gentlemen were elected Fellows of the Society :—John Chalmers, M.D. ; George Julius Engelmann, M.D. (St. Louis) ; W. B. Lindsay, M.D. (Ontario), Edward H. M. Sell, M.D. (New York) ; and Henry E. Trestrail, F.R.C.S. (Harston).

The following gentlemen were proposed for election :—Mr. C. Chapman Briggs, Mr. G. P. Field, Dr. J. H. Finegan (Liverpool) ; Mr. Wm. Garton, Dr. H. Charrington Martin (Reigate) ; Dr. Luther Parks (Boston, U. S.) ; Dr. Diego Perez (Monte-Video) ; and Mr. R. L. Verley.

Mr. FLETCHER BEACH exhibited the uterus and ovaries of a child, aged 7 years, who had died of tubercular meningitis in the Hospital for Sick Children. They were infiltrated with caseous material. The right ovary was ad-

herent to the vermiform appendix, the left to a portion of the small intestine.

Dr. W. H. Harris exhibited a segment of a large tumour which he had removed in India, and which was believed at the operation to be an ovarian tumour. The centre of the growth was occupied by a large cyst, the containing wall of which averaged about an inch in thickness, and consisted of dense fibrous tissue. The tumour weighed seventeen pounds. The patient recovered.

Dr. J. J. Phillips considered the specimen one of great interest. It seemed to him more likely that it was a uterine myoma than an ovarian tumour, though such a large cavity as it contained was rarely seen in a tumour originating in the uterus. The formation of this cavity was, however, probably due to a degenerative change in the myoma; and the specimen reminded him of a case brought before the Society by Dr. Carter, of University College, in which a large uterine fibroid removed after death had in some portions undergone calcification, while other parts had softened, forming a large cavity with a peculiar honeycombed appearance in its interior.

Dr. Graily Hewitt agreed with Dr. Phillips in considering the tumour exhibited to be a fibroid in which degeneration and disintegration had occurred in its central part, leaving a cavity there, the resistance of the walls of which prevented its closing up.

Dr. Sell, of New York, by request of some of the Fellows of the Society, exhibited the following three instruments, devised and used by Professor Carl Braun, of Vienna, viz.:—1. The *blunt-pointed hook*, which Dr. Sell said was now employed, not only at Vienna, but generally, for performing decapitation. 2. The *crooked trephine* (trepan), which had the advantage of being more readily employed than the straight one in every position of the head. 3. A *cranioclast*, being the *third* and *last* modification of the valuable instrument devised by Professor Braun. The action of this cranioclast is at the same time simple, easy, and powerful.

PUERPERAL CONVULSIONS IN THE NINTH MONTH OF PREGNANCY; ACCOUCHEMENT FORCÉ; EXPANSION OF THE CERVIX WITH BARNES'S DILATORS AND INCISIONS; DELIVERY OF THE FŒTUS WITH MY PARALLEL FORCEPS; INCISIONS OF THE PERINEUM; CHILD STILLBORN; RECOVERY.

By J. Lazarewitch, Kharkoff.

Maria I—, lady's maid, native of Bielgorod, near Kharkoff, had heard from her mother that once, when an infant at the breast, she had a fit of convulsions. At six years of age, in the summer, she was found lying in a field senseless by a soldier and carried home. During two years after this event she was confined to her bed; both her legs were swollen, and she lay for the most part on the right side. The swelling of the left leg subsided by degrees, but the right continued swollen, and she felt pain above the knee. At length an abscess formed on the outside of the right hip, and after bursting the matter continued to discharge for a long time. The right leg diminished considerably in length and thickness, and became anchylosed at the ileo-femoral articulation. At fourteen she began to menstruate with intervals of twenty-six days, and of two days' duration. At eighteen, about the end of September, 1871, she felt a movement in the abdomen, and learned from her mistress that this was a symptom of pregnancy.

In the morning of the 14th of January the patient felt pain in the abdomen and in the back; at four in the afternoon she fell from a chair and was seized with a fit of convulsions. The patient's mother, thinking to stop them, lay on her abdomen, and immediately observed that "the waters" were discharged.

At eight o'clock in the evening the patient was brought to the lying-in hospital in a perfectly unconscious state. She was of middle stature; rather strongly built. Her

right coxo-femoral articulation was entirely deprived of the power of movement; on the outside of her right hip were six scars; the right leg was shorter than the left. Her face was puffy, and in places, particularly about the mouth, covered with blood. Her hands were clenched and pressed to the trunk. The pupils of her eyes were dilated and insensible to light. The right side of her tongue bore the marks of the teeth. Her breathing was rapid (50) and stertorous; her pulse very feeble (160); temperature 41 5° C. The girth of the abdomen was 37 inches. The uterus a long-oval, inclined to the right; the fundus uteri seven and a half inches higher than the os pubis; the walls of the uterus hard and perfectly unyielding. On auscultation of the abdomen only the uterine souffle was heard. The orifice of the uterus, scarcely admitting the finger's end, was directed to the sacrum. The head of the fœtus presented itself. The conjugate diagonal measured four inches and a quarter and the conjugata vera three and a half inches. With the right coxo-femoral articulation completely anchylosed was a considerable lordosis of the lumbar vertebræ.

At 10 o'clock at night I saw the patient for the first time. She was in the state described above. Taking into consideration the profound comatose state of the patient, depending on asphyxia, I determined, in order to save her, to empty the uterus of its contents as quickly as possible. Grasping with the fore-finger the orifice of the uterus and gradually drawing it forward, I thus stretched it a little. Then I introduced the dilators of Dr. Barnes, first the smaller then the larger one. In a short time with their assistance I extended the orifice of the uterus to an inch and a half in diameter. Unfortunately the larger dilators, having been left in the lying-in hospital, were spoiled. After this extension the margin of the orifice of the uterus was perfectly unyielding. For its farther extension I made, with a pair of long curved scissors, six slight incisions in its circumference, after which the orifice extended considerably, and became more yielding. In the course of the

above operation the patient showed some disquietude and uttered feeble groans, especially during the pains, which now became quite evident. At each pain the head of the fœtus descended and became fixed, but between the pains it was rather mobile.

The patient was laid across the bed and I began to apply the forceps. The head being high and the orifice of the uterus insufficiently dilated, the application of the forceps was rendered still more difficult by the impossibility to move laterally the right hip. Notwithstanding these very considerable obstacles, I succeeded in applying my parallel forceps. Eight tractions were necessary to bring the head to the orifice of the vagina. By this time, the margin of the perineum was so thin and stretched that to prevent a rupture I was obliged to make with the curved scissors two lateral incisions. After this, with carefully supporting the perineum, the head was extracted. A female child, without any signs of life, weighing 2550 grammes, was delivered, and five minutes later the placenta.

During the extraction with the forceps the patient groaned louder than before, and her pulse became more full. The operation, from the commencement of dilatation of the orifice of the uterus to the delivery of the placenta, lasted thirty-five minutes. Immediately after delivery the pulse was 140, the respirations 42 in the minute, and the temperature 39° C. During the first hour after delivery the patient had six stools of a dark colour and very fœtid, by which she appeared considerably relieved. On the third day after delivery the left eye opened and the pupil was dilated, but that of the right eye was contracted. On the fourth day the patient recovered consciousness, opened both eyes, and apparently heard and understood the questions put to her, though unable to answer them. Pulse 94, Res. 28, Temp. 38° C. The next day the patient began to speak and ask for food. On the seventh day she was up and began to walk.

The first days after delivery the urine contained a considerable quantity of albumen, which gradually diminished,

and after the lapse of twelve days totally disappeared. Three weeks after birth menstruation recurred and lasted three days. On examining the patient forty days after delivery she appeared quite healthy and weighed 133 pounds. Pulse 90, Res. 28, Temp. 37° C. The uterus was in a state of retroflexion.

In the case I have described convulsions and a comatose state occurred in the ninth month of pregnancy. The convulsive fits of her infancy show that there previously existed in her organism a predisposition to them. We must suppose that the patient was subject to epilepsy, and the attacks during pregnancy occurred in an aggravated form, owing to the disturbance caused by the gravid uterus. A more violent lateral pressure than usual in the vessels of the system of the aorta, with anæmia of the brain, was sufficient to bring on a transudation at its basis causing the convulsions. The speedy evacuation of the uterus must have been beneficial by changing the above conditions in the blood-vessels.

In a case before described by me,* after many attacks of eclampsia, and while the patient was in a comatose state, I induced labour by injection to the fundus of the uterus, and at length extracted the child with the forceps. The mother recovered. And in another case, quoted in the same paper, the patient, a native of Italy, suffered from epileptic fits, which on two previous occasions of delivery had assumed a very threatening aspect. In two subsequent cases of pregnancy the recurrence of epileptic fits was prevented by induction of premature labour.

The above cases terminating favorably fully prove the advantage of a speedy evacuation of the gravid uterus in cases of epilepsy or eclampsia.

The case now described clearly shows the superiority of my parallel forceps. I doubt whether I should have succeeded in applying the ordinary forceps with crossing blades, while the right coxo-femoral articulation was anchylosed, the vaginal aperture so narrow, the orifice of the uterus not fully

* 'Trans. of the Obst. Soc. of London,' vol. ix.

dilated, and the head of the child not fixed. I quite agree with Doctor Barnes, that in some cases the pressure exerted by the mother's parts upon the blades in my forceps is insufficient, and sometimes it is necessary to increase the compressive power of the forceps. For this purpose I have made some alterations in my forceps. They have now a ring above the handles, which are furnished with wood. The forceps with these improvements are in every respect suitable for application, grasping the head, and traction.

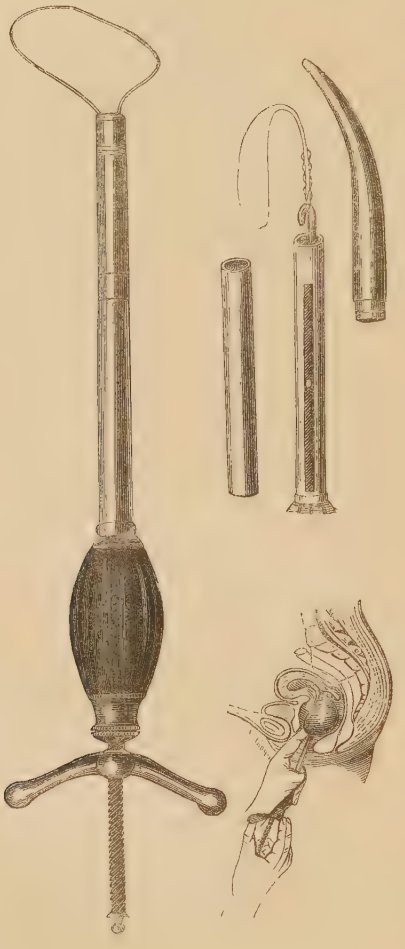
When traction is required without pressure of the head, it is necessary to apply the tractive force to the end of the handles, holding them as a tooth key with one or with both hands. Holding them in this manner with one hand, if great *traction* is required, the other should be placed above the handle with the middle finger in the ring; but when more or less *pressure* of the head is required the handles must be grasped with this hand transversely and the little finger in the ring. By holding the forceps thus with only one hand, the head is delivered from the vaginal aperture, while the perineum is supported by the other.

NEW CONSTRICTOR FOR THE REMOVAL OF TUMOURS OF THE UTERUS.

By J. Lazarewitch.

Operations on different tumours in the cavity of the cervix, as well as in the corpus and at the fundus uteri, I perform *in sitû*, guided only by palpation. I have lately used in these operations with success the single wire écraseur of Dr. Meadows. But wishing to have a more even conductor for the wire, without hook and lateral apertures, and with a more convenient handle, I have had such an instrument made.

It consists of a cylindrical tube, the lower end cased with wood and having at the side a groove, in which moves a



little pin connected with a screw. This groove is covered with a thin silver cylinder. To the upper end of the

cylindrical tube is attached one of the bent tubes, which are of different lengths and curvature. Through the whole instrument passes a screw, at the top of which is a hook to hold the wire. At the lower end of the screw is a nut with two club-shaped handles.

On the 5th May, 1872, I removed with my constrictor from a patient a fibroid polyp as large as a moderate-sized apple; it was attached by a thick pedicle near the inner orifice of the uterus. This patient was a landowner, B—, forty-nine years of age, of strong constitution, but very anæmic. At fifteen she began to menstruate, each time during seven days. She was the mother of seven children, and had once miscarried. During the eight years previous to the operation she had had at short intervals very copious metrorrhagia. I performed the operation in a few minutes, guided with the fingers of my left hand, and without exposing the sexual organs. The day after the operation the patient was out of bed, and she recovered her health rapidly.

The photograph represents the instrument, half its size, and the operation in the above case.

The discussion on "The Use of Perchloride of Iron as a means of arresting post-partum Hæmorrhage" was then resumed.

Dr. Snow Beck remarked that, although the injection of strong styptics into the cavity of the uterus, to arrest *post-partum* hæmorrhage, had been recommended on the plea of necessity,—the well-known means being considered insufficient, in many cases, to attain this object, it became necessary to seek for some new power—still he believed it would not be difficult to show, though this would involve too much detail, that the usual remedies were in almost all

cases sufficient for the purposes when they were efficiently employed; and, further, that styptics could not be thus injected into the gravid uterus soon after delivery without incurring the risk of certain death to the individual. And if this were the case, it would follow that they ought only to be used with great caution, in a modified manner, and in exceptional cases. The results which appear to follow their employment were:—(*a*) the hæmorrhage continued and no ill consequences resulted; (*b*) the bleeding was arrested and the woman either recovered fairly, or had a lingering convalescence; (*c*) the hæmorrhage was stopped, the woman appeared very well for two or three days, then complained of a feeling of great weakness or sinking, the pulse increased to 130 or 160, the abdomen became tender and tympanitic, followed by vomiting, diarrhœa, a peculiar delirium, and certain death. The inquiry of greatest interest appeared to be how this sequence of symptoms and unfortunate result was produced. Referring to a remark in the paper, that hæmorrhage when it occurs after the uterus was completely contracted the bleeding came from the arteries, it should be remembered that hæmorrhage only occurs when the uterus is relaxed, and does not take place when the walls of the organ are effectively contracted. Certainly, the late Dr. Gooch many years ago described "a peculiar form of hæmorrhage" which occurred when the uterus was contracted to the ordinary degree after the birth of the child, but the cases he published furnished evidence that the uterus was relaxed when the hæmorrhage took place, and that the hæmorrhage was arrested as soon as the organ became contracted. Thus, about twenty minutes after the birth of the child fearful hæmorrhage took place; cold applied to the abdomen and other remedies failed to arrest it, the closed hand was introduced into the uterus and the walls pressed between it and the other hand was applied to the abdomen, when "while she (the lady) complained of pain, I (Dr. Gooch) felt the uterus contracting and here was an end of the hæmorrhage and the alarm." Now, the closed hand could not have been introduced into the cavity of the uterus unless it had been

relaxed, and the hæmorrhage was finally arrested as soon as complete contraction took place. It was of much importance to determine the vessels from which the blood issued, in considering the effects of injecting styptics into the cavity of the gravid uterus. Generally it was considered that it came from the veins or sinuses, or, in the words of Sir James Simpson, that it was "not arterial, but a venous hæmorrhage by retrogression." Yet the character of the blood was clearly arterial, being of a bright red or scarlet colour, and the force with which it came away in violent hæmorrhage was inconsistent with the idea that it came from the veins. The late Dr. F. W. Mackenzie had shown by injecting defibrinated blood into the hypogastric arteries of a woman who had died from hæmorrhage with the placenta partially adherent, that the blood readily escaped from the open extremities of the lacerated utero-placental arteries. And in the case recorded in the paper where the hæmorrhage had recurred four or five times, the blood could only have escaped from the arteries, seeing that all the veins or sinuses were completely choked with black grumous fluid up to the iliac veins on each side, this grumous fluid containing a large amount of iron, as shown by chemical examination. On examining the internal surface of the gravid uterus under water the veins or sinuses were very apparent and readily gave rise to the impression that the blood must have come from these orifices, especially as open orifices of the lacerated utero-placental arteries were not apparent without some dissection. But on looking carefully at the seat of the placenta many white dots were perceived, which, on being drawn out with the fine point of a needle, proved to be the utero-placental arteries imbedded in the thicker layer of soft tissue at this part; the orifices of these vessels being open, and their canals free from any coagula or other obstruction. This condition of the uterus,—which was the same in other cases he had had an opportunity of examining after injection with the perchloride of iron, and none of which presented any evidence of any inflammatory action,—afforded an explanation of the serious consequences which too often followed

the injection of styptics into the gravid uterus in order to arrest post-partum hæmorrhage, *i. e.*, that the styptic injected was taken up from the internal surface by the open and pervious veins, carried into the circulation, and caused the certain death of the individual. Exactly in the same way as purulent or sanious fluids were taken up, conveyed into the general circulation and produced analogous symptoms, known under the name of puerperal fever. By those who advocated the injection of styptics, the ordinary remedies, as ergot of rye, cold, compression of the uterus, local stimulation by the introduction of the hand, &c., were said to be insufficient to attain the end in view, the contraction of the walls of the organ. Were this the fact it would be most desirable to seek for some "new power" in order to arrest the bleeding. But he was obliged to differ from those who adopted this view, and to consider that the failure to procure contraction of the organ depended more upon the mode in which these remedies had been used, rather than upon any want of power in the remedies themselves to produce the effect desired. It had been considered that their action depended upon the presence of some nerve-force which rendered the system capable of responding to the peripheral irritation induced by their action, and that when this assumed nerve-force was not present in sufficient amount these remedies were incapable of inducing a corresponding action upon the uterus to cause it to contract. For example, cold applied in whatever way produced contraction of the uterus through reflex action, and in the absence of this so-called nerve-force in sufficient amount the irritation caused by the cold could not be transmitted to the uterus, and no beneficial action was induced. He considered this theory to be a serious error, and to injuriously influence the way in which these remedies were employed. For any reflex action to exert a strong influence upon the uterus it was an essential condition that there should be free communication between the part acted upon and the organ to be influenced by cerebro-spinal nerves through the medium of the spinal cord. And such was not the case with the uterus; for the nerves

furnished to it were singularly small, consisting chiefly of ganglionic nervous fibre, and containing very few cerebro-spinal nervous fibres. The media of communication were thus wanting, and the uterus was only to a small extent influenced by any reflex action. It was, in fact, to a great extent isolated from the rest of the body, and possessed to a large extent an independent action of its own. And when it became necessary to excite a languid organ into powerful action, especially when the general system was much depressed, it became essential to stimulate the tissues by direct irritation. Cold applied suddenly to the abdomen would, no doubt, cause contraction of the uterus when a slight stimulus was sufficient to effect that object. But in severe hæmorrhage, where a powerful stimulus was required, it becomes necessary to apply the stimulus direct to the uterine tissues before the required action could be induced. As in the cases recorded by Dr. Gooch, where peripheral irritation was of no avail, and it was necessary to introduce the hand into the uterine cavity, and to irritate the contractile tissue by compression of the uterine walls before contraction could be induced and the hæmorrhage arrested. If the ordinary remedies he used were to directly and powerfully stimulate the uterine tissues they will almost always be found sufficient for the purpose. The administration of ergot of rye was of great use, not so much by *inducing* contraction as by *maintaining* it when once induced, and thus preventing any subsequent reflex action. For it appears essential to the safety of the individual to produce and maintain complete contraction of the walls of the organ by which the arteries are compressed in their course through them, and hæmorrhage avoided or arrested, and by which the veins and sinuses are also compressed and their canals closed, so as to prevent any absorption of injurious matters into the general circulation. It had been said that by the topical action of the styptics the blood was seized and coagulated as it flowed away, that the tissue at the inner surface was constricted, and that the vessels were contracted at their orifice and retracted in their length.

These effects had not been directly observed, and it was difficult to perceive how they could take place. Coagula had sometimes been seen in some of the veins or sinuses, but no coagula had as yet been found in the arteries from which the hæmorrhage evidently proceeded,—the tissue at the inner surface was of so soft and non-contractile a nature as scarcely to admit of effective constriction,—the coats of the arteries were so thin and so directly adherent to the uterine tissues as to prevent any contraction in their calibre, or retraction in their length. Indeed, the whole appeared to be subservient to the condition of the contractile tissue itself. Yet cases did occur where the topical application of styptics were of the greatest use, and where they were sometimes the means of saving the life of the individual; as after the manner designated by Dr. Wynn Williams the ready method, and adopted from the late Dr. Rigby, where an accoucheur on an emergency seized a lemon, passed it through the hand already in the uterus, squeezed out its contents, and arrested the hæmorrhage. Or, after the same manner, when the stimulus of the hand introduced into the uterine cavity is not sufficient, and an additional stimulus becomes necessary, by sponging or swabbing the inner surface with a styptic, removing all coagula, and allowing the hand to be expelled by the contraction induced; and in such cases the administration of the ergot of rye to maintain the contraction was of much service. The great danger in the injection of styptics is here avoided, the walls of the uterus are contracted, the veins or sinuses closed, and all absorption through them is prevented. Again, in secondary hæmorrhage, which comes on after the first ten days or so, when the contractile tissue has undergone changes which render it almost impossible to induce any further contraction, sponging or swabbing the internal surface is often of great use in arresting the bleeding. The same may be said in continued hæmorrhage after an abortion when the contractile tissue is not sufficiently developed so as to contract and close the different blood-vessels. But after the use of the styptic it becomes desir-

able to wash out the uterine cavity each day with a weak disinfectant lotion; and the same principles appear to be applicable to the whole, viz. that comparative little danger was incurred by the application of any styptic to the inner surface, the great danger apparently arising from the absorption of any fluid by the veins or sinuses when their canals remain pervious, the consequent poisoning of the general system, and the almost certain death of the individual.

Dr. Heywood Smith rose to explain, lest leaving the point unanswered might waste the time of the Society. Dr. S. Beck had quoted his (Dr. Heywood Smith's) first deduction, and commented on the expression of "hæmorrhage after complete contraction of the uterus" as referring to an impossibility. Dr. Heywood Smith said that of course he referred to a state of subsequent relaxation happening after the uterus had once contracted firmly, and, therefore, after the uterine sinuses had been squeezed empty. He said that he thought it would be understood by all present that *during* complete contraction no hæmorrhage could take place.

Dr. Bantock thought it the duty of those who had had any experience of the remedy under discussion to make public the results of their experience. He had had only one case, but it was of the most disastrous character. It was as follows:—"A lady of wiry constitution, who had always enjoyed good health, and had passed through several labours without any accident, the wife of a naval surgeon, and within a fortnight of the natural term of utero-gestation, was suddenly seized with severe hæmorrhage of the kind called "accidental." Immediately on his arrival he examined the patient and found the os as large as a crown piece, but its tissues were so rigid as to forbid any attempt at artificial delivery. No trace of the placenta could be found within the circle of the os as far as the finger could reach. He passed an elastic bag, and distended it with air, so as completely to fill the vagina, with the double object of preventing further hæmorrhage and of promoting the dilatation of

the os. After two hours, during which time there was no hæmorrhage, he found the os more open, and he then sought the assistance of Dr. Barnes, who arrived in due course, and after a short delay extracted a small child with the forceps dead. The placenta was at once removed, along with a considerable amount of coagulum, evidently the result of the primary hæmorrhage. There was then no hæmorrhage, and the uterus was well contracted; but taking into account the exhausted state of the patient, and the probability that any amount of post-partum hæmorrhage would prove immediately fatal, he thought it advisable to inject the uterus with a solution of perchloride of iron, as a measure of precaution. No sooner was the iron injected than the patient began to complain of severe pain in the hypogastrium. Nepenthe to the amount of a fluid drachm was administered, but without in the slightest degree relieving the pain, which increased in severity until, finally, she lost it with her life from seven to eight hours afterwards." He thought there could be no doubt as to the relation of cause and effect, and believed he rightly assigned death when he attributed it directly to the injection of the iron, and indirectly to the hæmorrhage; for he had seen patients recover from a greater state of exhaustion, and believed his patient would have recovered but for the untoward accident. It was evident the case was not one of post-partum hæmorrhage, but as an illustration of, at least, one of the effects of the remedy, it was only two apposite. He thought the question of very great importance and one not to be lightly dismissed. Neither was the remedy to be wholly condemned because a fatal case or more had been met with; nor was it to be adopted as a matter of course because of the results obtained by those who had related their experience of it. His experience of post-partum hæmorrhage, of such amount as to cause the usual and well-known physiological results of severe and sudden loss of blood, was small for the reason, as he believed, that he always followed the uterus into the pelvis as the child was being expelled, and never left it till he was assured of its contraction. He could relate cases

in which imperfect attention to this had nearly resulted in the loss of his patients. Compression to be done well should be done intelligently, and he was sure he had often warded off post-partum hæmorrhage by its means. By using the left hand and pressing the outer edge of the palm until it touched the spinal column, the abdominal cavity was divided into two. It was then impossible for the uterus to get away, and although it might relax until its outline could no longer be felt, yet its walls were kept in apposition, and the vessels were compressed and that without using such force as to injure the tissues, as Dr. Barnes had suggested as possible. In his original memoirs published in the eleventh volume of the 'Transactions,' Dr. Barnes passed in review the various means employed in the treatment of post-partum hæmorrhage, but it appeared to him (Dr. Bantock) that in his desire to leave something for his pet remedy to do, he had not laid sufficient stress on the value of compression. He himself had, on several occasions, held the uterus in his hand for hours, holding it firmly, in the manner explained, while it threatened to relax, and relieving his hand when it again contracted; he had never required any other means for arrest of hæmorrhage, and he had not lost a case. So impressed was he with the value of compression, when rightly done, both as a preventive and a curative measure, and so sensible of the dangers attending the use of intra-uterine injection of iron that he believed he would never employ it. In the one case he would have the satisfaction of feeling that he was employing the remedy which nature had taught him to use and that he could at least do no harm, while in the other he would be oppressed with the fears of adding to the danger already incurred, and of destroying his patient's last hope.

Dr. Wynn Williams considered it had been clearly demonstrated by the history of the cases as detailed by the previous speakers that the injection of solutions of per-chloride of iron into the cavity of the uterus for the purpose of arresting post-partum hæmorrhage was accompanied with considerable risk, and that of a twofold character. The

one was exemplified by the case just related by his colleague Dr. Bantock, namely, the entrance of the solution by some means or other into the cavity of the peritoneum, and so causing fatal peritonitis. This was a consequence that might possibly follow the injection of any fluid into the uterus of the parturient female. The other source of danger was that exemplified by the cases related by Dr. Braxton Hicks and others; death from septicæmia caused by the retention of the coagula, their escape being rendered more difficult by the astringent and corrugating effects of the iron on the os and cervix uteri. He thought there could be no doubt but that for the care and attention paid to the case of the patient related by Dr. Braxton Hicks in breaking up and washing away the clots from the interior of the uterus, his patient would have died from the absorption into the system of the septic poison generated by the retention and putrefaction of the retained clots. Dr. Wynn Williams went on to say that no doubt it was in the recollection of the Fellows who were present on the occasion when Dr. Barnes read his paper recommending the injection of perchloride of iron for the purpose of arresting post-partum hæmorrhage, that he then stated the use of perchloride of iron for this purpose was not new to him, as he had applied it to the interior of the uterus in case of post-partum hæmorrhage long before he had the pleasure of Dr. Barnes's acquaintance or knew his mode of procedure. His method, however, of applying it differed from that of Dr. Barnes's, inasmuch as he, Dr. Wynn Williams, did not inject it into the uterus, but applied it by means of a sponge. After having employed all the recognised means to arrest the hæmorrhage, the left hand being already in the uterus and having emptied it of all clots, a sponge saturated with tincture of perchloride of iron and water (equal parts) is passed along the hollow of the left hand and the interior of the uterus sponged well over with it. When this is being done the uterus can be distinctly felt contracting over the hand, necessitating its withdrawal from the uterus; generally the sponge and small clots follow at the same

time. Should the sponge not be expelled at the same time it can be readily withdrawn by means of a string attached thereto. This mode of treatment having been found most harmless and satisfactory by the speaker, he stated he should certainly continue to use it whenever occasion required, being fully convinced that it is quite as efficacious as injection, and at the same time freed of its risks.

Dr. Protheroe Smith said: Sufficient evidence has been brought forward this evening to show that perchloride of iron should not be used indiscriminately as an intra-uterine remedy, especially post-partum. But when the fearful character of the malady, for which it has been suggested, is taken into consideration, and the numerous instances in which it has been used with impunity, I cannot but regard it as a valuable remedy when others fail to arrest the fatal issue. Exclusive of placenta prævia cases it has been my lot only once to witness death from primary post-partum hæmorrhage, and most thankful should I then have been for any means by which such a disastrous event might have been averted. Whilst, however, not wishing to discredit the good effected by this remedy, we must not ignore facts which show it to be occasionally followed by serious results. I allude amidst others to one well-authenticated case which was brought to my notice last year in which an obstetric physician injected the perchloride of iron solution in primary post-partum hæmorrhage. In a few hours great pain ensued and metro-peritonitis terminated fatally in five weeks. Also two other cases in which the remedy was employed for hæmorrhage in the non-puerperal state. In one, a case of carcinoma, the uterus was injected with the iron by a well-known French surgeon. This was rapidly followed by fatal metro-peritonitis. The other case which I witnessed had an injection of two drachms of the tincture of the perchloride of iron to six ounces of water, and terminated fatally in like manner as shown in the post-mortem examination. But are there no other means of obtaining the good effect of the styptic, and of avoiding its tendency to mischief? With a view to this I wish to sug-

gest a vegetable astringent in lieu of the mineral, and to bring prominently before the consideration of the Society the use of the undiluted tincture of matico. I have long employed it to restrain hæmorrhage, which usually is promptly arrested by it. Although I have employed it extensively to diseased tissues, to the cavity of the uterus, and to cut surfaces after operations, I have never observed any injurious consequences. I use it by means of a soaked plug of cotton-wool secured by a string, with which it is easily removed, or by injecting it *in utero* with a suitable syringe. My attention was first called to this powerful styptic by witnessing, whilst a pupil of Mr. Kiernan, forty years ago, the result of some experiments by two Frenchmen who came to London to exhibit their "Liquid Hæmostatique," by which they professed to be able to arrest any hæmorrhage, even that from a large artery. The styptic effects were remarkable, though in some instances when used on cotton-wool secured by a thread over the wound of the carotid artery of a sheep, it failed. This hæmostatic I found to be simply tincture of matico. I now beg strongly to commend this powerful styptic to the notice of the Fellows of this Society with a view further to test its efficacy as a valuable remedy in post-partum hæmorrhage.

Dr. Holman expressed a strong opinion of the value of the injection of perchloride in cases of hæmorrhage uncontrollable by the ordinary means.

Dr. Edis related the heads of a case where secondary hæmorrhage occurred ten days after delivery, the blood being bright and florid. The cavity of the uterus was syringed out with Condy's fluid and water, and then with equal parts of tincture of iron and water. Hæmorrhage returned on the following day, and in spite of ergot, pressure, cold, and all the ordinary appliances, death seemed imminent. The uterus was again washed out, and then one ounce of the tincture of iron injected and left in. The patient slept well after it; had no pain or inconvenience. The pulse and temperature diminished, and it seemed to be

the starting-point for recovery. A pyæmic abscess on the left hand and over the left hip, which commenced before the injection of iron, retarded her convalescence, but she ultimately did well. The hæmorrhage seemed to be arterial. The uterus contracted after the employment of the iron, and although the pure tincture was injected no evil results ensued. On the contrary, the patient owed her life to it. He had also employed it in several other cases with marked success.

Dr. Rogers said, that as so much time had already been devoted to the discussion he only desired to make a few remarks, and he would be very brief. Of course it was well understood that it was only when all other means had failed that one was justified in having recourse to injection of iron into the uterus for post-partum hæmorrhage. He had injected the pure tincture of steel in seven cases with immediate good result, and in only one case did any serious after consequences follow to cause anxiety; but the case recovered, so that he had never lost a patient whom he had injected with tincture of iron. He felt, therefore, that after all other available measures had failed, and as a *dernier ressort*, injection of iron ought to be tried; but perhaps the plan advocated by Dr. Wynn Williams might be the safer method of using the styptic.

Dr. Playfair asked Dr. Beck how many cases of death resulting from the injection of perchloride of iron he had personally seen. It would be interesting to the Society to know that, inasmuch as many Fellows had repeatedly injected without ever witnessing any bad result; while he, who confessedly had never used the remedy himself, had had the bad fortune to witness several fatal cases.

Dr. Snow Beck replied he had seen nine or ten cases where death had resulted from the injection of perchloride of iron to arrest hæmorrhage, and had examined the uterus after death in three cases. In each the veins or sinuses were filled with thick black fluid, but without any signs of inflammation in any part. He had not himself injected the uterus to arrest *post-partum* hæmorrhage, having always

found the usual remedies sufficient. He had seen nearly all the cases on account of the symptoms which began on the second or third day, and which were considered to be puerperal fever; but there could be no doubt that the symptoms and death were caused by the iron being taken up by the pervious veins and conveyed into the general system.

Dr. Barnes regretted that the time at his disposal did not permit of his answering in detail all the speakers. He did not complain that Dr. Beck had spoken at such length; much of what he had said was deserving of consideration. He could have wished that Dr. Beck had thoroughly exhausted the matter. It was eminently desirable that everything that could be urged against the practice of arresting post-partum hæmorrhage by injecting perchloride of iron should be stated; but there was little hope that the spirit of criticism which was so strong in Dr. Beck ever could be exhausted. That Dr. Beck should differ from him was no matter for surprise. It could hardly be expected that two men pursuing such opposite careers should agree. Dr. Barnes's life had been spent in hard clinical work, Dr. Beck's in cultivating his talent for criticism. Dr. Barnes ventured to say that this question was to be decided, not by *à priori* anatomical closet speculations, but by experience at the bedside. It was a clinical, an empirical question. Dr. Beck, admitting he had never used the remedy or seen it used, laboured by ingenious anatomical argument to prove that the perchloride of iron *could not* cause the uterus to contract, or close the arteries. The simple answer was that it *did both*, and did it effectually. Often had he had his hand in the flaccid bleeding uterus to clear out the placenta and clots, and felt the inner surface of the uterus contracting, corrugating, crinkling under the contact of the iron as it flowed, stopping the bleeding and expelling the hand. This was the experience of all who had followed the practice. Dr. Beck had elaborately proved that the uterus was not made to contract by reflex excitation; by his anatomical data he showed that the uterus had such slender

nervous connection with the spinal cord that it was, in fact, an organ isolated from the general system. The uterus isolated from the general system! independent in its action from the nervous centres! Why, a thought would cause the uterus to contract! A thought would cause it to dilate! What practical surgeon had not noticed this? If their plain physiology was thus at variance with Dr. Beck's anatomy, he must take leave to conclude that Dr. Beck's anatomy was wrong. Dr. Beck asserted that ergot, cold, galvanism, pressure, were sufficient to arrest hæmorrhage. That seemed to be the opinion of others who had scarcely seen a case of death from hæmorrhage; but such an opinion could only be entertained by those who had seen but little practice in difficult midwifery. He (Dr. Barnes) had seen many women bleed to death after all these means had been used unsuccessfully by men as skilful as any in that room. Dr. Bantock's case was one which had given him great anxiety; he had been much disposed to interpret it as Dr. Bantock had. Certainly the pain followed so close upon the injection that it must be attributed to the injection. Still, it did not follow that it was the cause of death. The prostration was already extreme. The real cause of death had been pointed out by a previous speaker, Dr. Hayes. That cause was probably shock. In extreme exhaustion from bleeding a very slight cause was often enough to extinguish the patient. He had known women die from the shock of passing the hand into the uterus; he had known death from the shock of injecting cold water. Indeed, he believed that cold water might be more dangerous than perchloride of iron. Dr. Routh's case was one of septicæmia, for which he certainly could not blame the perchloride. Flooding predisposed powerfully to septicæmic fever. It frequently occurred when no styptic injection had been used. It had struck him as a remarkable fact, in this and also in the previous discussion, that those who condemned most warmly the practice of injecting iron solutions to arrest hæmorrhage were those who had at most seen it used once, and whose experience of post-

partum flooding was small; whilst it was emphatically approved by men who had used the remedy frequently. Nothing could be truer than Dr. Holman's description of the risk run by delicate pampered women. What power they had was often exhausted by the mere effort of bringing forth the child. There was none left to obviate bleeding. He had often said that such women had never known a day's work until they fell in labour. It was no wonder that they sank under the crisis. Nerve, muscle, glands, all wanted to carry out this great effort, could not be extemporised. It was our business to help them. Where the uterus could not be made to contract then we could not rely upon excitation; where grasping the uterus must at length be abandoned, then it was that the perchloride of iron came in as a new power to save life at the last extremity. The testimony to this effect was unanswerable. He felt deeply his responsibility in advising the use of a remedy which to many seemed dangerous. But the conviction he had acquired that he had saved many lives, otherwise doomed, by this practice, was too deep to permit him to hesitate in continuing to pursue it, or to urge others to do the same. When all ordinary remedies were ineffectual, should we look on passive, folding our hands behind us, or turn upon our heels and let the woman die?

Dr. Savage never met with a case of immediate post-partum hæmorrhage rebellious to the old-fashioned practice. Since the commencement of this discussion he had ascertained that such also was the experience of certain leading obstetricians in London and in the provinces, all of whom, without exception, were entirely opposed to these iron injections. Groundless alarm had probably, in many instances, led to their premature use, and the overlooking of Dr. Barnes's own reservation, viz. to use the perchloride as a last resource, and only after ordinary means had been tried and failed. Dr. Bantock's was clearly not a case for the perchloride, yet judging by his (Dr. Savage's) experience in the use of injections in obstinate metrorrhagias the pre-

liminary dilatation of the cervix would have saved the patient from the chance of "shock." Was iron a safe agent *per se?* He had some doubts about that. So long ago as 1857 he published in the 'Lancet' nine cases (the first of the kind) illustrating the immunity from uterine injections in dangerous metrorrhagias, provided that the os and cervix had been previously well dilated. The late Sir J. Simpson predicted he would kill a patient some day, but he and his friend Dr. Routh had so treated hosts of cases since with no such result. The physiological antagonism between the uterine cervix and uterine body is set aside by mechanical dilatation preventing not only the dangerous retention of the injection, but positively favouring, perhaps inducing, the contraction of the body of the uterus. The fluid he preferred was the strongest solution of iodine, solutions of iron having more than once brought about unpleasant complications. He disagreed entirely from Dr. Beck as to the essential source of the hæmorrhage. The veins of the uterine system had no valves; in short, fatal retrograde venous hæmorrhages were on record. In the case of the uterus, doubtless, there would be arterial hæmorrhage also. The uterus had three sets of arteries:—1, arteries of nutrition; 2, those (straight) which make their way between the duct tubes to form the vascular trellis in the lining membrane; 3, the spiral arteries, which open direct into the uterine sinuses; hence the peril attending post-partum hæmorrhages was to be averted, not by the formation of iron clots but by firm contraction of the uterus and the entire emptying of the sinuses. Dr. Savage did not believe that a morsel of adherent placenta could be the true cause of post-partum hæmorrhage *commencing* long after parturition; at the moment, of course, it would be so, the hæmorrhage *continuing* more or less till its removal. Could Dr. Savage ever be induced to have recourse to perchloride he would use a strong solution, taking care to prevent premature contraction of the cervix. A weak solution would promote the formation of tough adherent coagula in the sinuses, with after consequences necessarily of much evil

tendency. Whatever the ultimate fate of iron injections, Dr. Barnes's bags would remain a lasting heritage. The practice followed by Dr. Holman and by Dr. Williams were models founded on the true principle; here the hand or fingers were retained within the uterus until the styptic having done its work and come back again out of the uterine cavity permitted of that entire and wholesome contraction which otherwise such agents would tend to prevent.

Dr. Heywood Smith, in reply, said he was glad to find that the case he had brought forward had proved so full of interest to the Society. He would not attempt, at so late an hour, to reply seriatim to all the subjects touched upon by the large number that had joined in the discussion; but he would only make some general remarks on a few points mentioned by the speakers. Even considering all that had been said, he did not regret having brought forward the case, as it was proper when any new therapeutical agent was introduced, or any old one put forward in a new relation, that the profession should fairly investigate and try it, and having done so, report the result, favorable or otherwise. Though many had spoken against the intra-uterine injection of iron, yet on the whole the balance of opinion that night was in its favour; but Dr. Heywood Smith wished it to be distinctly understood that the lesson he had tried to deduce from the experience of the case he had brought forward, was that though the intra-uterine injection of iron might be a suitable remedy in some instances in cases of *primary* hæmorrhage, it was not so in *secondary*. He maintained that after the process of involution had commenced, and absorption had become the normally active condition of the uterus, it was unwise to inject into it anything which, being absorbed, might prove deleterious; and therein lay the error in his case, an application should not have been made in sufficient quantity to be absorbed. Dr. Braxton Hicks had mentioned that he thought the solution injected too strong; but in the discussion on Dr. Barnes's paper in 1869 Dr. Braxton Hicks himself had said that he used it four or

five times diluted, but "if the hæmorrhage was obstinate he increased the strength." Dr. Barnes also mentioned in his paper that it was rare to find renewal of the hæmorrhage after the injection of the iron. Doubtless he referred to primary hæmorrhage; but here was a case of secondary hæmorrhage in which the bleeding did recur, and in which the solution was gradually increased to meet that recurrence. Then with regard to the cause of death after the injection of iron; in those cases where it had not happened from shock it was usually stated to have been peritonitis. Now this case had no peritonitis, but died from pure puerperal septicæmia, which septicæmia apparently commenced after the injection of the iron. In answer to a remark of Dr. Savage's that the piece of placenta could not have caused the hæmorrhage, Dr. Heywood Smith observed that the presence of a portion of placenta in the uterine cavity would prevent its proper closure from contraction, and would leave a portion close to the placental nodule impressed upon, and so in a condition favorable to hæmorrhage from the uterine arteries opening upon that portion. Dr. Heywood Smith also wished to draw attention to the fact that at the British Lying-in Hospital, since he had made it a rule, during his month of attendance, that *every* patient should have ergot after labour is over, and so ensure the proper contraction of the uterus, there had been much fewer cases of puerperal mischief. He begged to thank the Society for the attention they had given to his paper.

APRIL 2ND, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—31 Fellows and 3 visitors.

Books were presented by Professor T. Halbertsma, Dr. W. L. Richardson, Dr. B. S. Schultze, and from St. Thomas's Hospital.

Dr. Edward H. M. Sell and Mr. Henry Ernest Trestrail were declared admitted as Fellows of the Society.

The following gentlemen were elected Fellows :—George Chapman Briggs, M.R.C.S.; George Purdey Field, M.R.C.S.; James Herbert Finegan, M.D. (Liverpool); William Garton, M.R.C.S.; Henry C. Martin, M.B. (Reigate); Luther Parks, M.D. (Boston, U.S); Diego Perez, M.D. (Monte Video); and Reginald L. Verley, M.R.C.S.

The following gentlemen were proposed for election :—Dr. James R. Chadwick; Mr. Frank W. Cooper; Mr. Nathaniel Goodchild; Dr. Robert Gray (Armagh); Mr. P. W. Jones; Mr. Francis Seymour (Odiham); Mr. Edward H. Steele (Kingston); and Mr. Charles Sage Ticehurst (Hastings).

Dr. A. E. Martin, of Berlin, was proposed for election as a Corresponding Fellow of the Society.

Dr. COOPER ROSE exhibited a child with a malformation of the genital organs. The case was referred to a committee consisting of Dr. Rose, Dr. Rasch, and Dr. Hayes.

Dr. Heywood Smith exhibited an instrument which he called an artificial jaw or crusher. He first conceived the idea some years ago on reading a pamphlet by Dr. King, U. S. A., "On dividing the Funis without tying it." Dr. King had advocated the plan, especially in cases of thick gelatinous cords. Dr. H. Smith had tried it in many cases, generally with good success, especially in large cords. By its means the cord, after being bitten through by the instrument, can be crunched so as to render its drying more rapid. The instrument consists of a wavy set of finely pointed teeth working in an under set, grooved. The lower part is held firmly, and the upper is moved backwards and forwards by the thumb, which rests on a portion made for that purpose. Dr. Protheroe Smith had suggested that the instrument would be useful for dividing adhesions in ovariotomy, &c.

Dr. Cleveland mentioned a case in which a thick gelatinous cord had from necessity been tied more hurriedly than usual, and where unobserved bleeding had well nigh terminated fatally. He thought it would now and then happen that troublesome hemorrhage might follow the general use of such an instrument as that exhibited.

Dr. Heywood Smith also exhibited an improvement in the single wire écraseur, to be used in those cases where the end of the wire is required free during an operation, as in large uterine fibroids when removed by gastrotomy, excision of part of the tongue, or even in some amputating operations on the fœtus. In the ordinary écraseur the chain or wire forms a loop which must be passed over the part to be amputated; whereas with Dr. H. Smith's addition, which consists in making one side of the slit through which the wire passes movable, so that the wire can be passed round any structure and brought into the slit, the side piece shut down, and the thing is complete. A broken wire would be much more easily replaced with this instrument.

ON THE PROGRESS OF PELVIC PATHOLOGY DURING THE LAST TWENTY-FIVE YEARS.

By Edward J. Tilt, M.D.

When a man has been allowed to work an important subject for a long time, he should, at least for once, look back and try to estimate the real value of his own work by comparing it with what his fellow-labourers have subsequently done. I always intended to pass in review what had been done in ovarian pathology since I first began to show, in 1848, that its practical importance was great; and now, after a quarter of a century has passed away, instead of sending this communication to one of our journals, I submit it to the Obstetrical Society, because it bears on the principal diseases of women, and because some of those whose opinions I controvert have been, or are still, brilliant ornaments of this Society.

To estimate rightly the present state of pelvic pathology, you should try to realise what it was in 1816, when Recamier was beginning to study uterine diseases by means of the speculum. Women suffering from complaints that we can now individualise were said to suffer from inflammation of the lower bowel, unless pain above the pubes and leucorrhœa pointed to uterine disease. The teaching of the great Paris school, of which I am proud to be a graduate, gradually improved this state of things in France, but it lasted in England until 1845, when Dr. Henry Bennet's papers on inflammation and ulceration of the neck of the womb excited, in the minds of the leading men among the practitioners of the United Kingdom, the determination to study uterine affections just as they would other diseases.

Ovarian pathology had no part in this progress, for Boivin and Duges, writing in 1833, stated cancer to be the most important of ovarian diseases. They doubted the possibility of the ovary being inflamed, except during the puerperal

state. Chronic ovaritis was reputed so rare, that rules of treatment could only be conjectured, and they illustrated chronic ovaritis, by a case of misunderstood hæmatocele. They were, however, struck with the importance of peritonitis, they recognised fixation of the womb as a sign of ovarian inflammation, and thought they had found in peritonitis a frequent cause of abortion.

You can judge of the state of ovarian pathology in England by the valuable little work published by Dr. Seymour in 1830. In seven pages he notes the liability of the ovary to peritonitis; he expresses surprise that the loose texture of the ovarian stroma should not be inflamed oftener; he thinks the little abscesses that he found in it, might be inflamed Graafian cells, and he mentions having often found them enlarged and full of red or black blood. He knew that the enlarged ovary had a tendency to fall into the recto-vaginal pouch, and that it was not uncommon to find cheesy-looking matter in the ovaries and in the oviducts of scrofulous women.

Strange to say, Dr. Seymour's pathology was in advance of Dr. Ashwell's, who, in 1845, described acute ovaritis as not to be separated from the study of puerperal fever, although he gives some good cases that prove the contrary. In his belief the ovaries seldom gave disease to the surrounding viscera; but he admits having found chronic ovaritis to have been the origin of some of the most obscure cases that he had met with.

There was no hope for ovarian pathology so long as the functions of the ovaries were not understood, and one of the first to throw light on this subject was Dr. Négrier, Professor of Midwifery at Angers. In 1840 he presented a first memoir to the *Académie Royale des Sciences,* to vindicate a claim to the discovery of spontaneous ovulation. Describing what he had observed in his hospital and its dead-room, he was the first to show that the processes of ovulation might become inflammatory, and he describes this subacute form of ovaritis under the name of *vésiculite.*

The last work I have to mention was published in 1844,

by Dr. Chereau, under the title of 'Mémoire pour servir à l'Étude des Maladies des Ovaires.' In sixty pages he gives a very good account of ovaritis; he recognises the extreme rarity of ovarian abscess and the comparative frequency of the less acute forms of ovaritis; he mentions the frequency of peritoneal lesions without having any idea of the great practical importance of peritonitis as a frequent complication of pelvic pathology. As Dr. Chereau had little personal observation to bring forward, it is singular that he only mentioned Négrier's 'Mémoire' on some physiological question, and never alluded to his cases nor to his pathology.

These two important works had no apparent influence on French pathologists, and they attracted no attention in England. Ashwell does not seem to have known them, and our first president, Dr. Rigby, has not, I believe, mentioned them, although they were included in the books he left to the Society.

Such was the state of pelvic or ovarian pathology, for the terms are, to a great extent, correlative, when, in 1850, I wrote a book on 'Disease of Menstruation and Ovarian Inflammation,' to prove that the ovary is, as much a centre of pathological, as of physiological influence, and that pelvic pathology radiates from morbid ovulation.

Before showing you, that what I proposed in 1850, is now generally admitted, I shall briefly mention the reception that my views met with. Dr. H. Bennet, in his retrospect of uterine pathology, in 1856, would not entertain the idea of ovaritis having anything to do with the production of metritis, and he assumed that it was not possible for the ovary to have great pathological influence, because it had no mucous outlet; as if the absence of a mucous membrane had prevented the brain and the heart from having a formidable pathology. Dr. Rigby published some typical cases of subacute ovaritis in the 'Medical Times' for 1860, but neither the increased size of the ovary, with the recrudescence of this swelling at menstrual periods, nor its characteristic pain could make him see aught but *displacement* in his cases.

Dr. Fleetwood Churchill, writing in 1851, had seen cases

similar to those I have described as subacute ovaritis, but he thought it would be better to consider them as caused by ovarian irritation. The inflammation of the Graafian cells that I consider to be comparatively frequent he considers rare, and without symptomatology. I must own, that the criticism of one, who has done so much for medicine, would have had greater weight with me, if the chapter on Ovaritis, in his well-known work on 'Diseases of Women,' had exhibited a better knowledge of the subject. If his description of ovaritis had been based on the treasures of his own experience, it would have doubtless been equal to his best work, but instead of that, he only quotes authors who wrote before the discovery of ovulation, and does not even mention Négrier or Chereau.

Dr. West (1856) applied to inflammatory lesions in, and around the ovary, the mode of reasoning that he had adopted with regard to inflammatory lesions of the cervix, and affirmed that they were much too frequent to be of any importance. Alluding to one of the signs of ovaritis—pain—Dr. Bennet had said, that in nineteen cases out of twenty, ovarian pain meant cervicitis. "Gentlemen," says Dr. West, "save yourselves the trouble of disputing the question; I can assure you that ovarian pain means nothing but neuralgia." "Surely we might call it 'ovarian irritation,'" says Dr. F. Churchill. "No," rejoins our cautious pathologist, "irritation is too strong a word; it is only pain, the same old will-o'-the-wisp that has led so many men so wild a dance in the sterile regions of theory." If, where some of the best gynæcologists of Europe admit chronic ovaritis, Dr. Rigby could only see displacement, and Dr. West neuralgia, maybe these eminent men thought and wrote under the irritating influence of the exaggerated frequency, and of the no-less exaggerated importance ascribed to inflammation of the sexual organs; they lost the power of recognising it, unless supported by overwhelming evidence, thus carrying caution to the verge of blindness. With the exception of a reviewer, in the 'British and Foreign Medico-Chirurgical Review' for 1850, whose favorable, but searching, criticism is worth while reading, no one of any weight in our own country counte-

nanced my views, but they soon received the best possible confirmation from the dead-room evidence of four French hospitals.

Aran had just been appointed to the Paris hospitals when he came over here, in 1854. He had translated into French Dr. Bennet's work on 'Uterine Inflammation,' and he told me, that when another edition of it would be required, he would add to it a translation of my second edition, published in 1853. He did much better, for he examined very carefully the bodies of all those who died in his large wards, at the Hospital St. Antoine, and in 1858, he brought out his 'Léçons Cliniques sur les Maladies de l'Uterus et de ses Annexes.' I claim that work as the clinical demonstration of what I wrote in 1850; it is by far the best work that has been published on inflammatory affections of the ovary; one fault I find with it is, that it does not correctly represent my meaning with respect to subacute ovaritis, and that Aran forgot to notice the frequent occasions on which he was only confirming what I had distinctly stated in two editions.

Négrier confirmed and developed the views he had previously published by a more important work, called 'Recueil de Faits pour servir à l'Histoire des Ovaires et des Affections Hystériques chez la Femme,' 1858. The predominance of the ovary, in pelvic pathology, was further established in 1860, by Drs. Bernutz and Goupil, with a prodigality of proof and a minuteness of detail, that took by storm the reader's conviction. In 1869 Dr. Gallard founded on his own researches at the Pitié the valuable lectures he published on "Ovaritis" in the 'Gazette des Hôpitaux.' Of the more recent contributions to the pathology of the ovary, which do not appear to be chiefly founded on personal observation, I may mention the chapter on "Ovaritis," in which Courty closely follows Aran, and Dr. Scaglia's collection of cases, although his arrangement may not be the best, and chronic ovaritis be ignored.

The following propositions contain the pith of the first edition of my work, and before attempting to show you that they have stood the test of time, I may as well comfort you

with the assurance that several of them will detain us but a very short time.

PROPOSITION I.—*The admitted frequency of inflammatory lesions in the ovaries and in the surrounding peritoneum is of much greater practical import than is generally admitted.*

Many successive observers have testified to the importance of these lesions, as will be shown in discussing subsequent propositions, so I pass on to another.

PROPOSITION II.—*Of all inflammatory lesions of the ovary, those involving destruction to the whole organ are very rare, while the most numerous and therefore the most important lesions may be ascribed to a disease that may be called chronic or subacute ovaritis.*

It would be waste of time to give you proof of the confirmation of the first part of this proposition, but when you study the subject you will find that, with the exception of cases involving the fusion of the whole ovarian tissues into pus, cases accepted as acute by all observers, there is a great divergence of opinion respecting the name to be given to the less severe forms of disease. The same amount of inflammatory lesions, revealed by post-mortem examination, have been ascribed to acute ovaritis by one observer, and to chronic ovaritis by another, according as his mind felt most impressed by the long duration of the case or by the presence of pus in the ovary. The fact is, unless it be speedily fatal, ovaritis is always chronic, and is generally characterised by inflammatory exacerbations at menstrual periods. For that reason, I proposed to discard the term chronic and to give the name of *subacute* to the cases caused by a limited amount of, or by a less severe kind of, ovarian inflammation.

Aran represents me as having created a disease, in which, at a menstrual period, a Graafian cell inflames and gets quite well at the subsidence of the menstrual flow, another Graafian cell becoming in like manner inflamed, and as speedily cured at the following menstrual periods. This may

occur in some cases, but the statement made by me in 1850 was that, when once subacute ovaritis had originated in morbid ovulation, the disease was one of long duration, liable to relapse at menstrual periods. I am obliged to disclaim Aran's misstatement of what I wrote, for he has been copied by Courty and by Scaglia.

My views of morbid ovulation inclined me to adopt Négrier's term of *vésiculite*, but although it well marks the early stages of ovaritis, it is quite erroneous to suppose that inflammation limits itself to the vesicles. It extends to the stroma, and may so break it down, that it usually becomes impossible to say, how far the walls of the abscess are formed by the vesicle or the stroma; and to affirm, as Négrier does, that unless a vesicle contains the pus, an ovarian abscess is of little importance, is belied by all subsequent experience.

PROPOSITION III.—*As a rule, pelvic disease radiates from morbid ovulation.*

The ovary is to be understood as a federation of life cells; the Graafian cell is the ovarian unit of action; one healthy cell may enable a woman to menstruate and to conceive, one inflamed cell is ovaritis, and has been repeatedly seen to spread inflammation to the surrounding stroma or to the adjacent peritoneum.

Remember also how the ovary is cushioned in the midst of a large erectile apparatus, so well depicted by Dr. Savage and Professor Rouget, intended to provide for that extreme congestion of the sexual organs, without which there is no healthy menstruation and no healthy sexual orgasm. Bearing this in mind, you will understand that there sometimes occurs in the ovary what you can observe in a child's mouth, unless you intend to gift ovulation with an infallibility that dentition does not possess. You often see the healthy phenomena of dentition become obviously inflammatory, and dental pathologists say that this is not due to the pressure of the tooth, but to some misdirection of the force that governs nutritive processes. As in strumous children, the evolution of the dental germ may lead to ulceration of the gums, to some loss

of blood from their ulcerated surface, and even to necrosis of the alveolus, so in strumous women, ovulation may degenerate into an ulcer. As we see morbid dentition causing stomatitis and sometimes even erysipelas, so we become aware at times, that the little ovarian ulcer is surrounding itself by peritonitis.

There is not a medical dictum more deserving of being impressed on the memory of those beginning to practise, than that morbid ovulation is the "fons et origo" of most pelvic diseases of women. You will soon see that it gives the key to the right understanding of pelvi-peritonitis, hæmatocele, uterine affections, and diseases of menstruation. If you become convinced of this, you will impart your conviction to your patients, and you will thus do all in your power to check the imprudences which women are ever committing at menstrual periods—imprudences which are the chief exciting causes of diseases of women in the unmarried.

Proposition IV.—*Morbid ovulation is the most frequent cause of ovaritis.*

Aran admits the difficulty of distinguishing the anatomical conditions of morbid ovulation from those of inflammation, and Dr. Arthur Farre, 'Cyclopædia of Anatomy and Physiology,' 1858, does not hesitate to say that "the processes of ovulation are closely allied in their nature to inflammation, and are frequently evidenced by signs usually regarded as characteristic of inflammation." Bernutz, Gallard, and others have repeatedly found on post-mortem examination, that an attack of ovaritis originated in the inflammation of a Graafian cell, and in some cases the observer has convinced himself, that a first attack of ovaritis had been the result of inflammation in one Graafian cell, while the subsequent inflammation of another Graafian cell had led to a second and fatal attack.

The fact that ovaritis generally arises and relapses at menstrual periods renders it probable that inflammation spreads to the ovary from that Graafian cell on which ovarian activity is then concentrated for the work of menstruation, in cases in which it is not possible to ascertain

the fact by post-mortem examination. That the principal cause of ovaritis is to be found in the morbid performance of the proper function of the ovary harmonises with that law of general pathology which looks on disease as mainly caused by defective structure and defective endowment. Gallard, Bernutz, Sirèdey, and Aran, have confirmed my statement that highly lymphatic and scrofulous women are more than others liable to ovaritis, and they have frequently found in their ovaries or oviducts cheesy-looking matter or tubercular deposits. I do not mean to undervalue the influence of other causes, particularly when they occur at menstrual periods, such as the sudden shock of intense cold, copulation, the habitual indulgence in sexual desires that have no legitimate means of gratification, surgical interference with the womb, and blenorrhagia.

With regard to puerperal ovaritis, I still hold, that although it be essentially the same disease as any other variety of ovaritis, still its course is so acute and so modified by the puerperal state or by puerperal fever, that it requires a separate description. Dr. Bennet, Bernutz, and most authors take the same view; but some with Grisolle and Aran say we have no more right to establish a puerperal ovaritis than a puerperal bronchitis. How singular that they should not be able to see that whatever asthenic character may be imparted to bronchitis by puerperality, it does not enlarge to an extraordinary degree the constituents of the bronchi, as it obviously does those of the sexual organs, in order to enable them to carry on life at a much more rapid pace, so as to speedily reduce the womb from twenty-four ounces to an ounce and a half.

Before passing on, it is well to note, that even when women make good recoveries from puerperal ovaritis, the recovery is generally damaged by chronic ovaritis and by sterility.

Proposition V.—*Ovaritis is the chief cause of pelvi-peritonitis.*

Bernutz has handsomely acknowledged that I preceded him in placing beyond doubt the truth of this proposition,

and also in clearly establishing the immense importance of pelvi-peritonitis by its various associations with diseases of the sexual organs of women. To show you that this importance can scarcely be exaggerated, I refer you to his work and to those of Aran, Courty, Gallard, and Thomas; I shall only draw your attention to the origins and to the terminations of pelvi-peritonitis.

It is clear that ovaritis is an important origin of pelvi-peritonitis; but not its only origin, for with perfectly healthy ovaries, we often find a considerable amount of pelvi-peritonitis, that increases in intensity till we reach an acutely inflamed oviduct, so it evidently has a pathology of its own, and does not always share that of the ovary as was thought twenty-five years ago. It was then looked upon as a mere tube, and although I was able to relate some singular instances of its disease, I did not understand their import. Subsequent observers have positively established the intricate connection of salpingitis with pelvi-peritonitis in a considerable number of cases; but the nature of this connection has not yet been made out. This is the missing link in the chain of pelvic pathology, and I shall attempt to supply it on some future occasion.

The importance of unravelling this pathological puzzle has been felt by one of our distinguished Honorary Fellows, Dr. Matthews Duncan, who in his work "On Perimetritis and Parametritis," in 1869, considers metritis to be the chief cause of pelvi-peritonitis. He does not, however, exemplify this by cases or support it by new arguments, and if he were to say that inflammation creeps up from the womb through the oviduct, and that the fimbria spread it to the peritoneum, this has been said, over and over again, by Rokitansky, Bernutz and others. Were he to say that the inflamed body of the womb imparts inflammation to its serous covering, I do not think he would find any gynæcologist to agree to this, except during the puerperal period. Dr. M. Duncan supports his opinion by affirming that endometritis is more frequent than is generally admitted. It seems to me, on the contrary, that we have all become fully alive to that fact,

and, as far as I am concerned, it is the thesis I have always maintained, particularly in my third edition (1862); but out of many cases of chronic endometritis, that I have carefully watched, I do not remember one, in the course of which the womb became fixed by periuterine inflammation, unless there were also unmistakeable signs of ovarian disease to account for peritonitis.

With regard to the termination of pelvi-peritonitis, it has been found since 1850, that the more or less solid bands that mark the cure of inflamed serous membranes are, in certain conditions, capable of removal. Thus Bernutz has repeatedly witnessed the disappearance from the vaginal *cul-de-sacs* of the cord-like false membranes that he has previously identified. Aran has found the rent fragments of what must have been one band, and he thought Boivin had exaggerated the influence of adhesions in the production of abortion. Dr. Matthews Duncan has well shown that the gradually increasing strain of the gravid womb is sometimes quite sufficient to remove any adhesions by which it may be surrounded; so Bernutz is justified in recommending pregnancy as the means of effecting their removal. With these two exceptions we are still justified in looking upon these adventitious bands as irremediable, absolutely irremediable. On opening the bodies of the old women of seventy or eighty years of age, who died at the Salpêtrière, the womb and the oviducts were often found bound down to various parts of the pelvis by bands that must have existed for forty or fifty years. Without going so far, look at the post-mortem examinations in the works of Bernutz and Aran, and there you will find it repeatedly stated, that the posterior aspect of the womb was fixed to the rectum by so strong a band that the womb became immediately retroflected on the withdrawal of any force by which it was placed in its right position.

The great frequency of pelvi-peritonitis and the irremediability of its sequelæ should be borne in mind by those who have accustomed themselves to use the uterine sound as freely as the speculum, and by those who have brought themselves to believe that the first and main principle of cure for

all diseases of women, is to give the womb its right shape and restore it to its right place, although this be often unnecessary, sometimes impossible, and although an attempt to remedy this impossibility is sure to do more harm than good, even when it does not lead to a fatal result.

PROPOSITION VI.—*Blood is frequently poured out from the ovary and from the oviducts into the peritoneum.*

After mentioning cases in which it was evident that blood found in the pelvis could only have come from a rent in a highly congested or inflamed ovary, or from a ruptured oviduct, I concluded by asking, "Cannot we explain in this way the sanguineous pelvic tumours for which we cannot otherwise account?" This was in 1850, and about the same time, French pathologists were hard at work on the same lines, so that in 1853 I was able to write a chapter on hæmatocele, in which I admitted the rupture of a congested or of an inflamed ovary as its most important cause. Bernutz has not failed to mention that I did so before Professor Laugier sought in 1855 to establish a too exclusive theory of hæmatocele on such cases. That this, however, is the most frequent cause of hæmatocele, is admitted by Bernutz, Aran, Nélaton, Rouget, and you will find an instance of it admirably recorded, in the third volume of our 'Transactions,' by Dr. Madge. I have to repeat what I said twenty-five years ago, with respect to the passing of blood into the peritoneum at menstrual periods. When we bear in mind, how frequently pelvi-peritonitis seals up the distal end of the oviducts or binds them down, so as to prevent their embracing the ovary, and when we remember that extreme ovarian congestion is essential to ovulation, it is evident that at menstrual periods a certain amount of blood must often pass into the peritoneum, and find its way into one of the vaginal *cul-de-sacs.* We are justified in admitting this occurrence when, after a more or less morbid menstrual period, there is to be found an obscure sensation of fulness around the womb, on making a vaginal examination, the patient having no positive pain, but a sensation of abdominal

fulness and distress. As a tolerably healthy peritoneum can easily absorb an ounce or two of blood, the patient soon gets well, and I believe that many of the cases described by Dr. Barnes as hæmatocele in 'St. Thomas's Hospital Reports' were cases of this description, akin to hæmatocele, but undeserving of that name.

Unless the pelvic blood be encysted by peritonitis there is no hæmatocele, and all authorities have pronounced it to be as *rare* as simple pelvi-peritonitis is *frequent.*

PROPOSITION VII.—*Subacute ovaritis not unfrequently causes and prolongs metritis.*

We have already seen that disease may extend from the vagina to the womb, and thence to the ovary by passing through the oviduct, but the converse is maintained in the proposition you have just heard, and the question is interesting; for while authorities as opposed on pathological questions as Dr. H. Bennet and Dr. West agree in thinking me wrong, equally good pathologists side with me.

With regard to the physiological action of the ovary over the womb, at menstrual periods, we know it to be twofold. The ovary congests the womb to nearly double its usual size, causing it to descend lower in the pelvis. The ovary doubtless acts also on the mucous membrane of the body of the womb, causing it to swell during the first part of the menstrual period, and then to partially exfoliate. The uterus of women who have suddenly died during menstruation has been carefully described by various authors. Dr. Graily Hewitt has seen five such cases, and although he admits that a partial exfoliation takes place, he notes nothing similar to that complete peeling off of the mucous membrane of the body of the womb, that Dr. Tyler Smith has depicted in his 'Manual of Obstetrics.' This occurs, however, in membranous dysmenorrhœa, which is now admitted to be the result of some abnormal ovarian action on the uninflamed womb, although the frequent repetition of the act may permanently congest and inflame it.

It would seem as if the inflamed ovary had a somewhat

similar power to congest the womb and make it fall a readier victim to the well-known causes of metritis. I am quite aware that many uterine affections arise without any proof of ovarian implication, but it still occurs to me to frequently find more or less subacute ovaritis in those cases of uterine chronic inflammation that we have such trouble to cure and to keep well. Traces of this belief will be found in some of the old authors. Dr. Blundell is said to have taught it at Guy's, and Dr. Ashwell quotes approvingly Baron Portal's assertion that often, when he had expected to find proof of uterine inflammation, he had found inflammation or abscess of the ovary. I strongly insisted on this in my first edition. Aran fully confirmed my assertions, and as his work is out of print, I will give you the passages that bear most on the subject. "It would be something worse than exaggeration" says Aran (p. 95) "to refer to the neck of the womb, almost all the diseases arising from the several constituents of the sexual system. Incontestably the uterine lesion is often secondary and insignificant, while more important lesions are progressing in the ovary. It is therefore absolutely necessary to restitute to the ovary, the pathological importance it deserves, and would have always had, were not its lesions so difficult to detect. . . . Since I have more carefully examined patients and never omitted to inspect the ovaries, in the dead-room, I have become amazed at the frequency of ovaritis, alone or associated with chronic metritis; indeed, it was the persistence of ovaritis that made me understand, why the patient still suffered, although the uterine affection had been cured." Again, he says (page 584), "I have never met with chronic ovaritis, without there being also inflammation of the mucous membrane of the womb and ulceration of the cervix, particularly in young women and others who had not borne children. These women were supposed to be only suffering from disease of the cervix, but this was kept up by chronic ovaritis;" and he concludes (page 602), "I have no hesitation in saying that out of a certain number of cases of uterine disease, those suffered most in whom it was associated with chronic ovaritis, and that this fact was hitherto passed unnoticed."

It is scarcely necessary for me to say, that if Aran had taken the trouble to refer to my first two editions, he would have found, that in writing this, he was only confirming what I had long maintained.

Writing, in 1860, '*Sur le Frequence des Alterations des Annexes de l'Uterus dans les Affections dites Uterines,*' Dr. Siredey, of the Paris hospitals, supports the same views; so does Dr. Gallard in the work quoted. There is additional proof of the frequent coincidence of ovarian and uterine inflammation to be found in the fourth edition of Dr. H. Bennet's work 'On Uterine Inflammation,' at the end of which there is a letter, written to Dr. Duncan Stewart by Madoosudun Goopta, in which letter, our Indian confrère gives the details of the state of the sexual organs in fifty Hindoo women who died of various diseases. Out of eighteen cases, in which there was marked inflammation and ulceration of the cervix, there was also inflammation of the ovaries or of the oviducts in thirteen instances. Interpreted by the light of Aran's, Bernutz's, and my own clinical experience, this document has considerable value, but for the complete elucidation of this question, we still want hospital experience and post-mortem examinations on a large scale.

Proposition VIII.—*Ovaritis often leads to considerable and varied disturbance of menstruation.*

So long as the functions and the diseases of the sexual organs were little known, it was natural that pathologists should undervalue the part they play in causing diseases of menstruation, and that they should have, in the main, considered them to depend on constitutional causes. While fully admitting the potency of these causes, modern gynæcologists have demonstrated that menorrhagia, amenorrhœa, leucorrhœa, and even hysteria, are to a great extent mere symptoms of some one or other disease of the sexual organs. Dr. H. Bennet was working in the right direction, and he was right, to a limited extent, when in his second edition (1849) he ascribed diseases of menstruation to inflammation and ulceration of the cervix; for although the body of the womb

is chiefly concerned in the menstrual flow, disease of the cervix may so influence it, as to cause the menstrual flow to be insufficient or too abundant. It is, however, clear to me that when women suffer at the same time from diseases of menstruation and from inflammation of the cervix, the diseases of menstruation are not so much caused by the cervical disease, as by endometritis, which remained undetected because it was not sought for. There is no doubt of the ovary being likewise a frequent cause of diseases of menstruation in various ways, but limiting my inquiry to subacute ovaritis, I admitted in 1850 that its type so varied that its prominent symptom might be amenorrhœa, menorrhagia, dysmenorrhœa, or hysteria. You will find that Aran makes exactly the same statement, when treating of chronic ovaritis, although he objects to my using the word *type*, to specify each separate group of cases. My statement as to the greater comparative frequency of hæmorrhagic ovaritis is confirmed by Aran, Dr. Gallard, and by my reviewer in the 'British and Foreign Med.-Chir. Quarterly Review.' This can be easily accounted for by the abundant blood supply of the sexual system, by the energy of the blood-propelling power of the ovary, and by the fact, that chronic endometritis and ovaritis often go together. Subacute ovaritis causes amenorrhœa by a certain amount of destruction of ovarian tissue, and by the atrophy that sometimes follows the pressure of the substance of the ovary, by old, tough bands, that were once soft false membranes. Most recent observers confirm my assertion, that sometimes dysmenorrhœa is nothing but subacute ovaritis, and that the deep-seated, burning pain in the ovarian region, means a small ovarian ulcer or a limited amount of peritonitis around the rent Graafian cell; even Dr. West admits "that many cases of habitual dysmenorrhœa are probably due to a state of chronic irritation or inflammation of the ovaries." With regard to hysteria, the position I assumed in 1850 was, "that hysteria is always connected with ovarian irritation, and often depends on subacute ovaritis." The probability of hysteria thus depending on some disturbance of ovarian action, a predisposed nervous

system being of course admitted, has been confirmed by Négrier's work in 1858, by that of a Dr. Clairou in 1870, and by the papers 'On Ovarian Hyperæsthesia,' of Prof. Charcot, of Paris. We can easily understand that neurologists, who know little of diseases of women, should believe that hysteria is no more determined by one set of organs than by another; but we gynæcologists, who are bound to make ourselves intimately acquainted with the whole field of human pathology, agree to admit, that hysteria is partly dependent on some one or other disease of the sexual organs. As the one thing that these sexual organs have in common is the ovarian influence, whence they derive their power of action, it is probable that hysteria depends on some disturbance of this ovarian influence; that this disturbance is transmitted to the cerebro-spinal system by the ganglionic nerves was stated by Négrier and by myself, before it was advanced by Dr. Robert Lee.

Proposition IX.—*Some chronic ovarian tumours may be considered as aberrations from the normal structure of the Graafian cells.*

This has been subsequently held by many pathologists, but want of time forbids my doing more than to refer you to the work of Mr. Spencer Wells, in which, I believe, you will even find ample confirmation of Rokitansky's assertion that ova have been actually discovered in ovarian cysts.

It only remains for me, gentlemen, to thank you for having allowed me to vindicate my share in the progress that has been made in ovarian pathology during the last twenty-five years.

Dr. Edis concurred with Dr. Murray that the Society was much indebted to Dr. Tilt for his valuable contribution on the progress of pelvic pathology. He regretted that the treatment of ovarian disorders had not received that amount of attention that their importance demanded. Although much had been done in arriving at a more correct diagnosis we were still very much in the dark as to any efficient mode of dealing with them. Displacement of the ovary, ovarian dysmenorrhœa, ovaritis, &c.,

were more readily recognised than remedied. Cases were frequently presenting themselves in which little could be done either in the way of relief or cure. Their relation to primary uterine disease was in many instances unquestionable, and by a judicious treatment of this the ovarian discomfort was also removed. If those who had facilities for observing diseases of women would only record their experience and bring forward the cases, much might be done in furthering our knowledge of the subject, and then possibly the treatment would be more satisfactory than could be said of it at present.

Dr. Cleveland said that as so much stress had been laid by the President on the frequency of ovaritis he thought some definite information was needed for determining where ovarian irritation, as it is called, ended and where subacute ovaritis began. Considering how different are the constitutions of women, and how many must suffer from supposed ovaritis, in whom, after death, no confirmation or proof of inflammatory lesion is obtainable, he thought it incumbent on the author to apply these leading symptoms or indications whereby the inflammatory might be distinguished from the nervous affection.

Dr. Tilt admitted the frequent occurrence of uterine inflammation without ovarian inflammation, but he generally found evidence of subacute ovaritis in long-standing cases of uterine disease in which all the constituents of the womb were affected, some being congested and others inflamed. In such cases strong caustics, intra-uterine pessaries, and even the use of the uterine sound, had sometimes set up acute inflammation in the ovary and led to fatal peritonitis. Dr. Tilt observed that he had been obliged to limit himself, in the present communication, to a general view of the main advances made in pelvic pathology during the last twenty-five years, but he was quite aware that there was still much to be desired in the treatment of ovarian complaints, and he agreed with Dr. Cleveland that diagnosis was the weak point in ovarian pathology; for it had occurred to the best observers to be convinced they were treating an enlarged ovary which was, however, shown to be an abscess of the distal end of the oviduct, when the body came to be opened.

ON THE PATHOLOGY OF CERTAIN SO-CALLED UNILOCULAR OVARIAN CYSTS.

By Geo. Granville Bantock, M.D.,
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When, at the February meeting of this Society, in 1872, I took occasion to make a few observations on the specimen of cystic tumour exhibited by Dr. Meadows, I ventured to express the hope that at a future meeting I should be able to lay before you the specimen on which I founded my remarks. Through the kindness of Mr. Spencer Wells I have now the pleasure of placing it before you for inspection. On the occasion adverted to I took exception to the pathological explanation of his specimen offered by Dr. Meadows. In order the more fully to bring the matter before you, I may, perhaps, be allowed to recapitulate his observations. Dr. Meadows believed the specimen to be one of unilocular cyst of the ovary, and he suggested, as the probable explanation, that a Graafian follicle situated in the hilum of the organ had become the seat of cystic enlargement, leaving the remainder of the ovary healthy; and in reply to my objections he supported his views by stating that the microscopical examination of the cyst-wall had presented those structural elements which are supposed to be characteristic of disease of that organ. I shall revert to this hereafter.

Let me first draw attention to the specimen now before you. It consists of the uterus and its appendages as they were removed from the body of a patient æt. 16. On careful examination you will perceive that on the right side the ovary is healthy; and on holding up the appendages between you and the light so as to stretch the fold of peritoneum which extends between the ovary and the Fallopian tube, that peculiar organ the parovarium, or organ of Rosenmüller, is plainly seen. At its outer angle, nearest the tube, you will observe a small cyst, about as large as half a fieldbean,

evidently originating in one of the tubules of the organ. (Fig. 1.) This exhibits the first stage in the process of cystic disease. On the left side the ovary is also to be found entire and healthy; and in addition we see a cyst, about as large as the ovary, occupying the same site as the smaller one on the opposite side. On this side the three inner tubules of the parovarium are distinctly visible. It is worthy of note, in passing, that in position the left ovary was completely prolapsed into the left side of the utero-rectal space, evidently pulled down by the weight of the cyst. I may observe that the elegance of the preparation is considerably marred by the action of the spirit in which it has lain for many months, and the cyst does not show the delicate network of blood-vessels which characterised it in its recent state.

I conceive no one who saw it in its fresh state, or may even see it in its present state, will be inclined to object to its being called a non-ovarian cyst, or to doubt that it is a cyst of the parovary.

Little as is the attention which has been devoted to the healthy condition, or anatomy proper, of this body, still less is that which has been given to its morbid state. For the former, half a dozen lines, based on the researches of Kobelt, suffice, in the admirable article of Arthur Farre in the 'Cyclopædia of Anatomy and Physiology.'* After describing its appearance to the naked eye, as viewed between the observer and the light, he says, "The tubes, which contain nothing but a clear fluid, consist of fibrous membrane lined by a single layer of pale, cylindrical, epithelial cells. These tubular canals are not known to have any direct communication with the ovary." Of its morbid anatomy, he says, "So little attention has been given to the structure in its natural condition that accurate information regarding its morbid states can hardly be looked for." The so-called hydatids (of Morgagni) are formed "of the remains of the canals of the retrograde parovarium. Within the walls of these canals is collected occasionally a considerable amount of fluid, and it is probable that this is the

* Article "Uterus and its Appendages," p. 594.

origin of those larger accumulations to which dropsy of the broad ligament has been applied." Dr. West, in his work on 'The Diseases of Women,' has these words in a lecture devoted to the description of the various forms of ovarian cystic disease: "The first kind of simple cyst is one which, though in the immediate vicinity of the ovary, is, strictly speaking, not connected with it; but which I may mention here because, until comparatively recently, its nature was misapprehended, and "erroneous conclusions, based on this misapprehension, have been applied to real ovarian cysts." He goes on to speak of those small delicate cysts, the hydatids of Morgagni, which are often found hanging by a slender pedicle from the edge of the peritoneal fold extending between the Fallopian tube and the ovary, close to the fimbriated extremity of the tube, and containing a transparent, serous, or slightly gelatinous fluid, and of those which bear the same relation to the Fallopian tube, but sessile instead of pedunculated; and he continues, "Sometimes, too, a cyst of larger size may be observed within the folds of the broad ligament situated between the ovary and the Fallopian tube, but obviously not originating in either. . . . The difference of their seat seems to be the only point of dissimilarity between them, for the wall of both is composed of a thin, structureless membrane, incapable of division into layers, often, though by no means constantly, furnished with a lining of nucleated epithelium." I shall show that this statement of incapability of division into layers is not correct in these cysts which have their origin beyond the ovary.

"The size of an egg, an apple, or an orange is the greatest magnitude to which these cysts have yet been proved to attain; and the pendent cysts very rarely indeed reach dimensions sufficient to make them recognisable during life." "A visit to any of the large museums of this metropolis will suffice to convince any one that cysts of the Wolffian bodies of size sufficient to be distinguishable during life are of very great rarity, while the same evidence will also prove that for such cysts to exceed the dimensions of an apple is rarer still.

Whenever, then, a tumour is discovered in the abdomen, which has attained a greater size than that of the doubled fist, that circumstance may be taken as in itself affording almost conclusive proof that the cyst is not extra-ovarian, nor of that kind concerning which it can be foretold that its tendency will be to remain stationary rather than to increase in size." In a preceding sentence Dr. West suggests "the rupture of the delicate walls of both kinds of these growths," as their probable termination. I shall show that these views are inconsistent with known facts, as well as contrary to *à priori* reasoning.

It may not be amiss, at this point, to direct attention to the most recent researches on the anatomy of the parovarium. Dr. Banks, in his 'Prize Thesis' at the University of Edinburgh, as the result of numerous dissections, arrives at the following as one of his conclusions:

"At a certain period, on the summit of the Wolffian body, a new structure forms (supra-Wolffian body), distinct and separate from it, though apparently continuous with it; this structure is a distinct formation, and is not an altered condition of the upper tubules of the Wolffian body. In the male this forms the globus major of the epididymis, and in the female the parovarium."

Hence I use the name *parovarium* instead of *Wolffian body*, and it is a fair assumption that this peculiar body has some function to discharge during sexual activity; while it is worthy of remark that the ovarian cysts occur at the earlier rather than at the later periods of life.

Dr. Graily Hewitt, agreeing in the main with Dr. West, says, "Now and then, however, they attain a large size,"* and in confirmation of this he quotes Mr. Spencer Wells' case (No. 93) as well as one presented to this Society by Dr. Wynn Williams. The latter "was twenty-four inches in circumference." The following is Mr. Spencer Wells' description of the operation:—"The cyst was tapped, easily pulled out, and was found to be rather an offshoot from the right ovary than an ovarian tumour; so much so that I

* 'The Diseases of Women,' 2nd edition, p. 584.

consulted with Dr. Oldham (who was present at the operation) as to the propriety of removing the cyst and leaving the ovary, which it would have been easy to do. But the ovary felt hard," &c. "A cyst the size of a walnut in the left broad ligament near the ovary was laid open and emptied." Dr. Wilson Fox makes the following report on the specimen :—" A large cyst about twice the size of an adult's head. The Fallopian tube, flattened out, is seen to *course along its external surface.* The fimbriæ are, however, non-adherent and distinct. The ovary is found in a fold of the broad ligament, distinct from the tumour and presenting the natural appearance. It contains no cysts. The cyst is lined internally by a flattened polygonal epithelium," and so on. Dr. Fox makes no allusion to the parovarium, the site of which was evidently occupied by the cyst. I may be allowed the supposition that it was of parovarian origin. Beyond the above I find no allusion in any recent work on the subject of ovarian disease to cystic disease of the parovarium. But the records of ovariotomy yield several cases in addition to those quoted, whose description affords unmistakable evidence of similar origin; thus, Dr. Keith reports a case (No. 12), which he calls a "single cyst of the broad ligament coming off close to the uterus." And Mr. Clay, in his Appendix, quotes the following :—" Cyst in the broad ligament half an inch from the left ovary, twenty-four pounds in weight. Ovary healthy and of normal size." This description leaves no doubt that it was a parovarian cyst.

I have said that the literature of this subject is exceedingly meagre. Indeed, the greater number of recent authors altogether ignore this disease, even to the extent admitted by those above named. But it has gone forth, stamped with the high authority of West, that parovarian cysts never attain a greater size than that of an orange, and I cannot allow it to pass without a few words. Assuming, then, the existence of such disease as proved not only by the specimens before you but by previous observation, I must take exception to the argument used by West—viz. that because he

has never seen a cyst larger than an orange, such a thing does not occur; for it must, I think, be allowed that if a cyst in this organ may attain the size of an orange, there is no reason, in the nature of things, why such a size as is within the capacity of the abdomen should not be attainable. In fact, the probability is altogether the other way. It is to be observed also that the specimens examined by Dr. West have probably been obtained from women dying of other diseases at a period when the tumours had not begun to make their presence felt. Had they attained a larger size the patients would have been regarded as the subjects of ovarian disease and would have been treated as such, and if removed by operation the cases would have been described as "unilocular ovarian cysts" or "cysts of the broad ligament." Therefore the argument is a fallacious one, and the foregoing cases furnish conclusive evidence against it.

But we arrive at this conclusion from a consideration of the relations and structure of the cysts. In the first place, holding in view the sessile variety, the cyst is situated between two layers of peritoneum and is abundantly supplied with blood-vessels, whose development keeps pace, according to natural law, with the growth of the cyst. In the second place the cyst is not the delicate structure Dr. West would have us believe. In fact, its walls are of considerable thickness, as can be seen on cursory examination; and as it is an organized structure, deriving its contents from the secreting apparatus with which it is furnished, the cyst-wall keeps pace, in growth, with the increase of secretion, not by distension, like an india-rubber bag, but by growth of similar elements. Hence there is no limit to their dimensions, and the idea of rupture by over distension, as a rule, is utterly untenable.

I now come to the views expressed by Dr. Meadows:—1st. He suggested that the cyst might have originated at the hilum of the ovary. This is an opinion unsupported by a single reliable observation or by any known fact. In support of this statement I quote the following description of the anatomy and structure of the ovary from the seventh edition

of Quain and Sharpey's 'Anatomy,' vol. ii, pp. 988—9: "Beneath the peritoneal coat, which covers it everywhere *except along its attached border*, the ovary is enclosed in a proper fibrous coat of considerable thickness which adheres firmly to the tissue beneath, being in structural continuity with it. Towards the surface the ovarian tissue, which in this part has been distinguished as cortical, presents, especially in children, a different appearance from the deeper or medullary part, from being granular and having within it great numbers of small vesicles, the Graafian vesicles or follicles, which are *absent from the deeper part*." Such is the description given in our standard work, and it is conclusive against the view taken by Dr. Meadows.

I have quoted the description of the ovary from our standard text-book as that generally accepted, but it is right that I should notice the most recent researches on the subject. I refer to those of Professor Waldeyer, of Breslau, and Dr. Leopold, now of Leipzig. These observers deny the existence of true peritoneum covering the ovary according to the above description. They call attention to the existence of a white line, "the boundary line," bounding the ovary "along its attached border" (distinctly visible in the specimen, No. 1), across which it is impossible to obtain a layer continuous with the peritoneum of the broad ligament and the covering of the ovary. Dr. Leopold says, after having separated a portion of the peritoneum in a delicate thin layer up to the neighbourhood of the hilum it will invariably, in the attempt to continue the separation towards the ovary, tear in a serrated, sharp and straight, or undulating line exactly in the place of the boundary line. Dr. Leopold has also succeeded in demonstrating under the microscope a difference between the epithelium covering the peritoneum and that on the ovarian surface, which is illustrated in the accompanying figures with their explanations attached. I may add that he admits that this demonstration can only be made in the ovary of the young subject, and that at an advanced age it is impossible to indicate these peculiarities, probably from the changes which the ovarian

surface has undergone through the repeated rupture of Graafian follicles.

I assume then as a fact that the hilum of the ovary does not contain Graafian follicles nor the elements of cystic degeneration; and it is contrary to a physical law that a Graafian follicle should find its way through the firm fibrous tissues characteristic of that portion into the loose connective tissue between the layers of the peritoneal fold in which the parovarium lies, in the direction of greatest resistance, instead of towards the surface of the ovary. It is also, at the least, extremely improbable that in conjunction with such a cyst, assuming its possible existence, the remainder of the ovary should remain healthy.

2ndly. Dr. Meadows supported his views against my objections by stating that, on microscopical examination, a portion of the cyst-wall presented those elements which one would expect to find in an ovarian cyst. But we have seen that the tubules are lined by epithelial cells, and I am not aware that we have arrived at such a certain means of diagnosis as is implied in the statement.

Returning to Dr. Wilson Fox's report already read we find the following: "No other cysts could be found in the broad ligament." From this we conclude that he regarded the one under consideration as a cyst of the broad ligament, and Mr. Wells headed his case, "Non-adherent cyst of the broad ligament, &c." From what structures, then, did this or Dr. Meadows's cyst arise if not from the parovarium? Did they originate in a lymphatic vessel, or did they arise in the connective tissue? I assume as indisputable that all cysts lined by epithelium, and, in fact, all true cysts, take their origin in some cellular or tubular structure lined by epithelium, and they constitute the only form of cystic degeneration as distinguished from œdema of the connective tissue.

The relations of these cysts will vary according to their precise seat of origin. Thus, if the cyst arise in one of the tubules near the Fallopian tube, as on the right of the specimen, it will necessarily grow towards the tube rather

than the ovary, leaving a space of greater or less extent between itself and the latter, as in Mr. Wells' case (and specimen) or in Dr. Clay's case; if near the ovary it will seem to form part of that body, as on the left of the specimen, as well as in the specimen No. 2;* if in the long transverse tubule, which may be seen in the specimen extending as far as the side of the uterus, its relations will vary according to the point of origin. In parovarian cysts the Fallopian tube will usually be found lengthened out to a foot or more, as well as very much enlarged in calibre, as in the second specimen and in Mr. Wells' case. It is difficult even to conceive how the tube can be brought into such relations in the case of uncomplicated true ovarian disease. I would suggest as the probable source of these troublesome cases, as regards operation, in which the cyst separates the layers of the broad ligament and slips down by the side of the uterus, that they have originated in the transverse tubule above referred to. Of this nature would appear to be Dr. Keith's case, No. 73, which he describes as "a single cyst of the broad ligament coming off close to the uterus." I have seen several examples of this, and have felt that we wanted an intelligible and reasonable theory for their origin; but the frequent concurrence of ovarian disease with this has so obscured the subject that accurate conclusions were barely attainable. This theory satisfactorily accounts for them, and I offer it as a suggestion to future investigators.

In accordance with the facts already given and the views enunciated, we arrive at the conclusion that all unilocular cysts in the neighbourhood of the ovary, or involving it (by contact) though leaving it healthy, are of parovarian origin, and we are further driven to the conclusion, from considerations which will be adduced, that there is no such thing as true unilocular or *unifollicular* disease of the ovary, except in its earliest stage. It is true that we sometimes, though rarely, meet with an ovarian tumour consisting of one large cyst (specimen No. 3) with thick walls, having its inner surface marked by fibrous bands or a number of smaller cysts

* The specimens referred to in the paper were exhibited at the meeting.

projecting from its lining membrane; but at no time could this be called true unifollicular disease. In these the whole of the ovary disappears so as to leave no trace of healthy structure. This is in accordance with what we might expect from a consideration of the anatomical characters of the organ. Assuming the disease to have its origin in a Graafian follicle (and we must remember that there are no Graafian follicles in the hilum of the ovary), we are asked to assume that only that portion of the ovarian coat which immediately overlies the imprisoned vesicle has become the seat of that hyperæmia and thickening which are believed, I may say allowed, to be the cause of its non-rupture, and to interfere with the natural course of events, while the remainder of the organ continues healthy and in functional activity. It follows from this that the true ovarian tumour, of size sufficient to be diagnosed during life, is always multiple. I believe also that the cases of so-called unilocular disease said to have been cured by the injection of iodine were not cases of true ovarian disease. Assuming them to be parovarian, we have a ready explanation of the successful results obtained in those cases in which the cysts yielded a clear limpid fluid, and which were alone regarded as suitable for this method of treatment. The remarks I have to make on the characters of the fluid of parovarian cysts will show how they correspond with these requirements.

That a deep-seated Graafian follicle undergoing cystic degeneration, and imprisoned superiorly and on every side by others in a similar condition, may, by continued pressure, and the traction of healthy tissues, tending to their separation by the continually increasing follicles, force its way through the firm tissue at the hilum of the ovary, so as ultimately to gain access to the tubo-ovarian fold of peritoneum, I am not prepared to deny; but this admission does not answer the objection that in the case of unifollicular disease such a thing is impossible, or so improbable as to amount to impossibility. On the other hand, the theory of parovarian origin receives support from the preceding arguments, and is confirmed by the specimen before you, which shows a cyst

originating in one of the tubules of the parovary, which, by the necessity or accident of its position, has grown towards or involved the ovary separating the layers of the peritoneal fold in which it lies imbedded.

There is another peculiarity deserving of notice which further strengthens this view arising from the anatomical characters of the structures involved. In the case of true ovarian cystic disease it will be found exceedingly difficult to remove the external coat as a distinct layer, while in the parovarian it may be removed with the greatest facility, exhibiting an abundance of loose connective tissue. Dr. West has affirmed as a characteristic of parovarian cysts that they are incapable of division into layers. Now, the cysts before you, contradict this assertion in the most positive manner; for it will be seen that, in the case of specimen 1, the peritoneal coat has been separated from the cyst-wall to nearly a fourth of its extent by air which escaped between them in the attempt to inflate the sac, the point of the tube not having penetrated the sac. That incapability of division into distinct layers, and with facility, is characteristic of the multiple form of disease, I will not wait to prove. I will ask you to try the experiment on No. 3 and compare it with the other two. This is explained by the difficulty with which the ovary in its healthy state is deprived of its investing membrane. This is, in fact, impossible in an ovary which has been in functional activity for a few years, as will at once appear from the existence of the cicatrices.

When we bear in mind that the parovarium consists of a number of tortuous tubules, and that it does give rise to cystic disease, it becomes a matter of surprise that the disease of the organ should so often assume the monocystic form rather than the polycystic. That the latter does take place I believe the evidence furnished by specimen 2 will prove conclusive. For this also I am indebted to Mr. Spencer Wells. It was removed by that distinguished operator on the 14th February, and I regret that the specimen is not complete. It presented the same peculiarity as the cyst in No. 1 in that the ovary was adherent to it and perfectly

healthy, containing a recently ruptured follicle, which had been cut across in dividing the pedicle. It furnished a good example of the effects of the traction exerted by a growing body connected with it, for it was drawn out into an elongated form about double its usual length. The tumour consisted of two cysts, one holding thirteen pints and the other 12 oz. 6 drs. of a limpid, slightly opalescent fluid, of which a chemical examination was made for me by Dr. Divers, which is appended. The part of the ovary attached to it was removed by Dr. Leopold, of Leipzig, who was then in London, without injury to either of the cysts, and the tumour still shows in its site the trabecular structure which characterises the base of that organ.

In its recent state it very distinctly exhibited the boundary line, spoken of by Waldeyer and Leopold, separating the ovary from the cysts. The Fallopian tube courses round the outer aspect of the large cyst, and measures over a foot in length, while its diameter is so increased that at the fimbriated extremity it will admit the point of the finger. This is invariable in the case of the parovarian cysts, and is explained in this way. The cyst lying between the two layers of peritoneum, which constitute the tubo-ovarian fold, by its equal enlargement, the resistance being equal, grows towards both aspects, so that the tube crosses over the cyst for about one half its circumference, the edge of the fold, extending between the fimbriæ and ovary, affording a fixed point on the one side, and the uterine end of the tube the other. Thus the tube may be likened to an elastic band half encircling an elastic bag to which its ends are attached. As the cyst grows it must either slip past the tube on one side or carry it along with it. As a rule, a sort of compromise is effected, for the tube does not keep the middle line exactly, but usually appears more on the anterior half of the tumour. Dr. Meadows's case answers these views to the very letter (see diagrams).

On the other hand, the tube seldom undergoes any change in the case of the true ovarian tumour, except such as can be effected by traction on the edge of the fold, and even then it

never exceeds six or eight inches in length, while it remains loosely attached in the greater number of cases.

It will be remembered that the ovarian coat is so intimately connected with the subjacent tissues, and so broken by cicatrices that it is impossible to remove it as a distinct layer, and there is no reason to assume that the diseased condition differs, in this respect, from the healthy. Now, in this instance the outer covering may be peeled off as readily as an orange is deprived of its skin, leaving a distinct sac internally with walls of considerable thickness. This peculiarity will, I believe, be found to be a diagnostic sign of extraovarian or parovarian cysts, and it is distinctly marked in the first specimen. I have seen Mr. Wells convert a sac in this manner into two, the outer having a portion of the ovary attached.

What, then, are the characters by which we can distinguish an extraovarian or parovarian from a true ovarian cyst? I believe the following will be found trustworthy:

Parovarian.	*Ovarian.*
Peritoneal coat easily stripped off.	Peritoneal coat cannot be stripped off.
Ovary usually healthy and discharging its functions.	Ovary always diseased, and not discharging its functions.
Tumour most frequently unilocular.	Tumour always multilocular.
Fluid limpid, opalescent.	Fluid viscid, greenish, or brownish.
Sp. gr. very low, never exceeding 1010.	Sp. gr. always exceeding 1010.
Mucine scanty.	Mucine abundant.
Colloid always absent.	Colloid most frequently present.
Fallopian tube almost invariably attached and stretched to several times its normal length.	Fallopian tube most frequently separate, seldom increased in length, and never exceeding six or eight inches.

Chemical examination of the contents of a cyst received from Dr. Bantock, February 23rd, 1872.

Pale yellow and opalescent in bulk; in small quantity, not sensibly so. Viscosity hardly apparent, but sufficient to make the fluid take a good froth. Faint mawkish odour only when warmed, mixed with that of carbolic acid. Specific gravity exceedingly low, being barely 1003·6. (Forty-eight grammes were found to be equal in volume to 47·83 grammes of distilled water, both taken at 60° F.) Reaction to *litmus paper* faintly alkaline. *Alcohol* of 95 per cent. in large quantity precipitated a small quantity of flocculi. *Heated* to boiling for some minutes, no precipitate or opalescence was caused unless sal ammoniac had previously been added; a good quantity of flocculi was then thrown down (the sal ammoniac decomposes the albuminate of sodium, setting free the albumen). *Acetic acid* in minute quantity caused a slight opalescence, becoming a good flocculent precipitate on boiling. Both opalescence and precipitate almost completely dissolved by a little more acetic acid. *Nitric acid* in sufficient quantity gave a good flocculent precipitate. *Potassium ferrocyanide* gave no precipitate unless acetic acid had been added. *Corrosive sublimate* also gave none unless acetic acid had been added. In both cases the precipitate was then good. *Copper sulphate* gave a good precipitate, soluble in acetic acid. After boiling the fluid with sal ammoniac for some time and filtering off the flocculi of albumen the concentrated filtrate remained clear on addition of acetic acid, so that no appreciable quantity of *mucin* was present. The quantity of *albumen* obtained from fifty grammes (about thirteen fluid drams) was too small to be satisfactorily estimated.

The *conclusion* drawn from this examination is that the fluid was an unusually watery albuminous one, devoid of any other peculiarity.

Addendum.

Acetic acid.—After adding this in slight excess so as to remove the trifling opalescence at first produced the fluid

again became slightly opalescent on standing for two days, but no precipitate formed after even a longer interval. *Hydrochloric acid* (concentrated) caused gradually a not very marked opalescence, but no precipitate until it had stood for two days, when a slight one had formed, leaving the opalescence undiminished. *Corrosive sublimate* caused only gradually an opalescence a little more marked than that with hydrochloric acid, but no precipitate. But in two days a precipitate had formed, leaving the opalescence undiminished. Acetic acid now added gave increased opalescence, and in a short time the whole subsided, leaving the supernatant fluid quite clear. With acetic acid the fluid gave at once, with corrosive sublimate, a rapidly subsiding precipitate. *Copper sulphate* gave a good whitish precipitate partly soluble in free excess of the precipitant in the cold, entirely so on gently warming.

EDWARD DIVERS.

I am indebted to Dr. Junker for the very faithful drawing of the specimen, as well as for the diagrams which accompany this paper.

Dr. EDIS, without wishing to take an unfair advantage of Dr. Bantock, as he had not read the paper at length, but only given a very brief *résumé*, thought he had scarcely proved his point—that all ovarian cysts are multilocular originally and only became unilocular by the breaking down of minor cysts. The large specimen, when examined carefully, failed to prove that there had been a series of secondary cysts; there were certainly what appeared to be fibrous bands stretching across the inner surface, but without a more minute and careful examination it was difficult to say what they were. The subject was too important to be thus summarily disposed of.

a. Uterus. *b.* Ovary. *c.* Parovarian cyst.

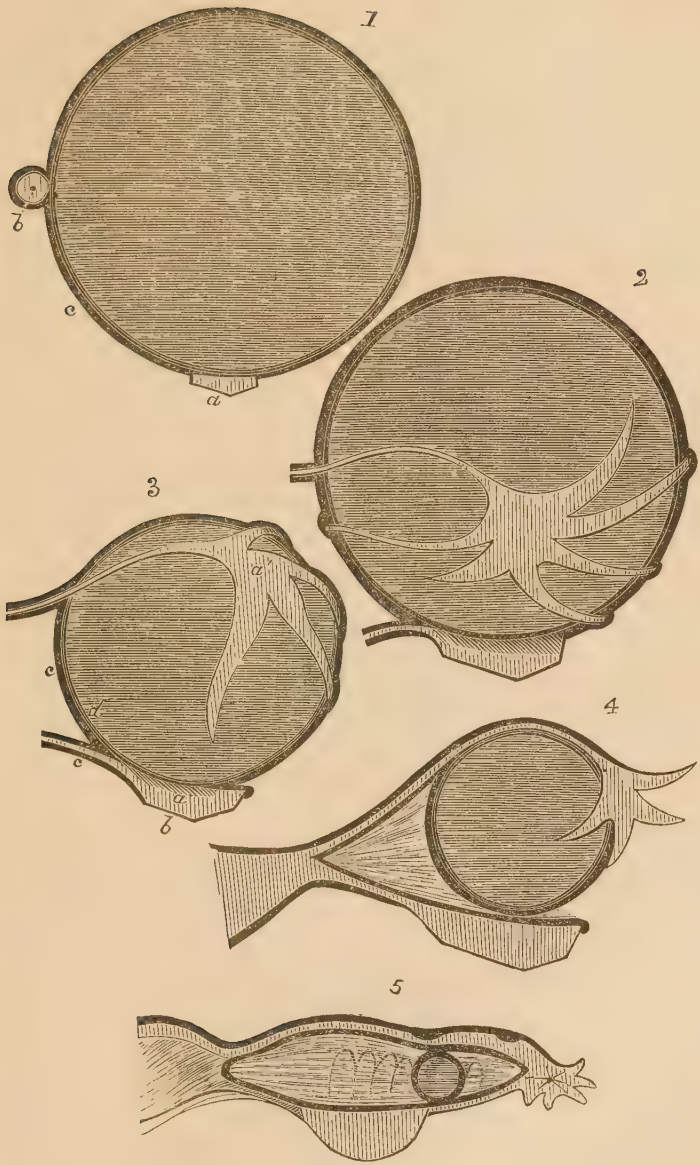


Diagram illustrating growth of parovarian cysts.
a. Ovary. *a'*. Fallopian tube. *b*. Ovarian tunic. *c*. Peritoneum.
d. Cyst wall.

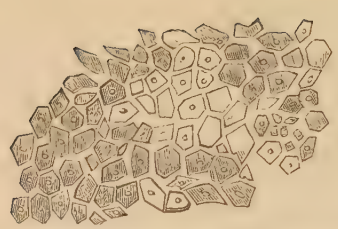


FIG. 1.—Superficial mosaic epithelium scraped from the ovary of a rabbit. 500 ×. (Leopold.)

FIG. 2.—Short cylindrical superficial epithelium from the ovary of a rabbit. *a*, Short-cylindrical; *b*, cuboid cells. 300 ×.

FIG. 3.—Ovarian epithelium, seen laterally. 500 ×. (Leopold.)

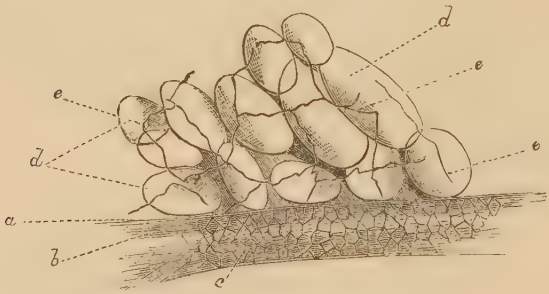


FIG. 4.—Ovary of rabbit, horizontal section. 300 ×. *a*, Boundary line; *b*, tract of connective tissue; *c*, mosaic epithelium of ovary; *d*, fat-cells; *e*, borders of the peritoneal epithelium (hardened in chromic acid). (Leopold.)

FIG. 5.—Ovary of rabbit, horizontal section. 300 ×. *a*, Boundary line; *b*, ovarian epithelium; *c*, ovarian epithelial cells without nuclei; *d*, with nuclei treated with nitrate of silver. (Leopold.)

MAY 7TH, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—33 Fellows and 4 visitors.

Books were presented by Dr. Bertherand, Dr. F. Bertier, Dr. Bougand, Dr. J. R. Chadwick, Dr. B. F. Dawson, Dr. Faye, Dr. Goodell, Dr. Madden, Dr. Spiegelberg, and Dr. Verardini.

Dr. E. H. Sell, Mr. Reginald Verley, and Dr. George Bate were admitted Fellows of the Society.

Dr. G. J. Engelmann (St. Louis), Mr. Wm. Garton (Oxford), and Dr. Luther Parks (Boston, U.S.), were declared admitted.

Dr. A. E. Martin (Berlin) was elected a Corresponding Fellow of the Society.

The following gentlemen were elected Fellows of the Society :—James R. Chadwick, M.D. (Boston, U.S.), F. W. Cooper, L.R.C.S. Ed. (Leytonstone), Nathaniel Goodchild, L.R.C.P. Ed., Robert Gray, L.K.Q.C.P.I. (Armagh), P. W. Jones, M.R.C.S. (Waltham Abbey), Francis Seymour, M.R.C.S. (Odiham), Edward H. Steele, M.R.C.S. (Kingston), and Charles S. Ticehurst, M.R.C.S. (Hastings).

Mr. Thomas Eyton Jones and Dr. James Stewart were proposed for election.

Dr. Barnes showed specimens of—

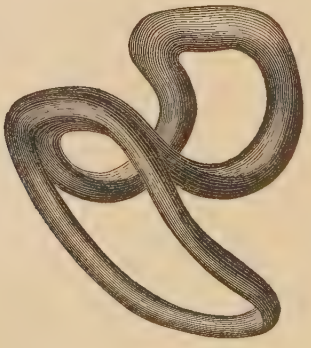
(1) Procidentia uteri, and

(2) Inversion of vagina with hypertrophic elongation of the cervix uteri.

Mr. Scott showed a cyst from a case of extra-uterine fœtation.

Mr. Ross Jordan exhibited a fœtus and portion of the placenta in a case of extra-uterine fœtation.

Dr. Playfair showed a pessary for cases of anteflexion. He said that, while we had in the Hodge's pessary an instrument which, generally speaking, answered admirably in backward displacements of the uterus, we had none which were thoroughly satisfactory in displacements forwards. Hewitt's cradle pessary, besides being bulky and difficult to introduce, had the serious disadvantage of being a fixed support, which did not adapt itself to varying positions of the uterus. The pessary now shown consists of an ordinary Hodge, which acts as a basis of support of



the portion which is intended to support the anteflexed fundus. This is constructed of watchspring, and being thoroughly flexible it can be pressed down during introduction so as to make the whole hardly more bulky or difficult

to insert than an ordinary Hodge. In the few cases in which it had been used it had answered admirably.

Dr. WILTSHIRE mentioned that he had used pessaries identical in principle and in shape for the same purpose with advantage.

Dr. SELL, of New York, showed some photographs of ossification of muscles in various parts of the body, including the pelvis.

The following is a detailed account of the specimen exhibited by Dr. Cooper Rose at the last meeting.

CASE OF EXTROVERSION OF THE BLADDER; ABSENCE OF THE RECTUM; THE COLON OPENING THROUGH THE WALL OF THE ECTOPIC BLADDER; ABSENCE OF THE SYMPHYSIS PUBIS; AND THE DEVELOPMENT OF THE UTERUS IN TWO LATERAL PORTIONS.

DR. COOPER ROSE, of Hampstead, exhibited a living infant three days old with the following malformation :—The whole of the abdominal wall below the umbilicus was absent. The posterior wall of the bladder projected forwards, forming a soft rounded tumour, the surface of which was red and bleeding at several points. The os pubis was deficient in the median line to the extent of about two inches. At the lower margin at each side of the tumour the labia were visible. There was no *true anus*, but there was a small aperture at the lower part of the soft projecting mass leading into a *cul-de-sac* which probably represented it. At about the normal situation of the pubis a part of apparently prolapsed bowel protruded, varying in length from one and a half to two and a half inches, having an aperture at the extremity through which fæces and flatus passed. Below this there was what appeared to be a coil of intestine filled by flatus, and giving exactly the idea, when looked at from below, of a scrotum denuded of skin, the intestinal protrusion above

representing the penis. At about the junction of the upper third with the lower two thirds of the extroverted bladder, there were two orifices, one on either side, being about an inch apart, which appeared to be the ureters, and from which a little oozing took place.

Upon pressing the finger into the abdominal cavity a small pear-shaped body could be distinctly felt on either side of the pelvis.

From appearances during life the idea would be conveyed that the rectum had terminated high up, had found a point of exit through the posterior wall of the bladder, and that through such opening the loose bowel had been pushed by its contents. The size of this projecting portion varied with the amount of fæces and flatus contained within it.

The funis at its point of attachment to the abdomen terminated in a circular gelatinous mass about one inch and a half in diameter, within which could be seen a coil of the cord. (This ultimately separated and came away with the cord, leaving an oval granulating surface with central depression.) The infant was born about a month before its time, but was otherwise properly developed.

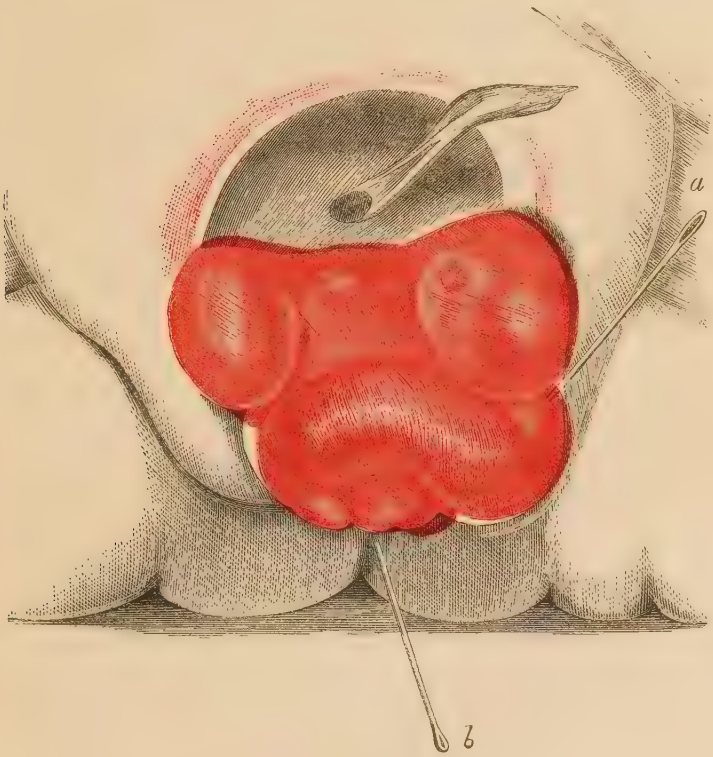
A committee was appointed, consisting of Dr. Rasch, Dr. Hayes, and Dr. Cooper Rose, to investigate and report upon the case. Dr. Westmacott took a sketch of the parts by gas-light during the meeting.

The infant died on 16th April, 1873, aged eighteen days.

Post-mortem appearances and result of examination made thirty-six hours after death by Dr. Rasch, Dr. Cooper Rose, and Mr. W. H. Payne.

The body was much attenuated. At the point of attachment of the funis there existed a somewhat oval-shaped granulating surface one inch and a half wide and one inch long, having a central depression, such depression forming the umbilicus. The lower margin of this granulating surface was marked by a narrow band of skin, below which the abdominal wall was altogether wanting. From the umbilicus above, the normal situation of the anus below, and bounded

on either side by the superior spinous process of the ilium, the space was occupied by a protruding, red, irregular tumour, the surface of which appeared to be mucous membrane. On either side of this tumour and situated at about the junction of the superior third with the inferior two thirds,



a. Entrance into colon. *b.* Entrance into cul-de-sac.

and at a transverse interval of one inch, were two openings, which on dissection proved to be those of the ureters. Below these in the median line was a larger orifice which opened into the prolapsed portion of the bowel through which during life the fæces passed. Below this point again was another

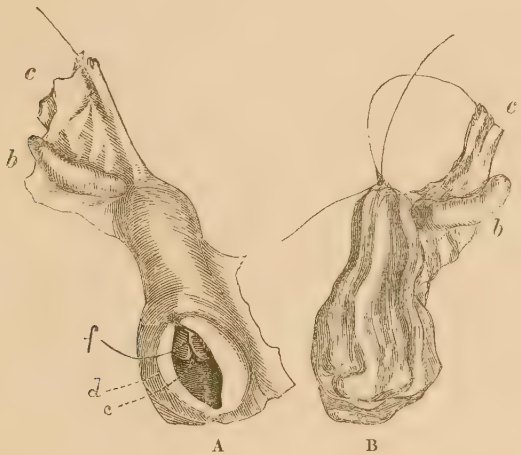
circular orifice surrounded on all sides by mucous membrane and which led into a *cul-de-sac* about an inch long. The lower margin was bounded by skin covering the buttocks, and the labia were developed on both sides.

Dissection.—The abdominal wall above the umbilicus was carefully reflected downwards. The ligamentum teres hepatis was normal. At the umbilicus rather strong adhesions had taken place between the abdominal peritoneum and the neighbouring intestines. Some of these adhesions were divided. On tracing the colon in the direction of the rectum, it (the colon) was found to communicate through the wall of the ectopic bladder with the orifice through which the fæces passed during life. Up to this point the bowel was of normal size; beyond this point the colon was continued for the length of two inches and a half, of about the size of a goose-quill, terminating in a *cul-de-sac.* This prolongation was unattached and floating in the peritoneal cavity like a vermiform appendix.

The ureter on the right side was traced and found to open externally at the point previously indicated. The left ureter was largely dilated and covered by small varicose veins having more the appearance of an attenuated portion of convoluted small intestine. There was no dilatation of the part near the wall of the bladder. It was full of fluid, which upon pressure found exit through the external orifice before described. Some of this fluid being examined by the microscope was found to contain pus, mucus, and triple phosphates.

The symphysis pubis was absent, leaving a space of one inch and three quarters. On either side of the pelvis, resting on the rami of the ischia, were two bodies three quarters of an inch in length, somewhat pear-like in form, broad below and tapering above, separated the one from the other by a space of more than an inch, not communicating the one with the other or externally. The body on the *left side,* being carefully excised and cut open longitudinally, was found to be one lateral portion of the uterus, having a central cavity lined by mucous membrane and communicating at its upper end with a pervious

Fallopian tube, having attached to it a *small* ovary and terminating in a fimbriated extremity. There was no cervix or vagina to this portion. On removing the body on the *right side* the upper portion of it exactly corresponded with the one just described. At the lower part, however, a distinct cervix uteri existed, projecting into a perfect *cul-de-sac*, possessing the characteristics of a normal vagina, but being only about half an inch in length, and having no external opening.



A. Right portion of uterus.
b. Ovary. *c.* Opening of the Fallopian tube. *d.* The vagina slit open. *e.* Os and cervix uteri. *f.* Bristle passed through uterus and Fallopian tube.

B. Left portion of the uterus slit open.
b. Ovary. *c.* Fimbriated extremity of Fallopian tube with a bristle passed through it.

Here was an instance, therefore, of a uterus being developed in two lateral portions perfectly unconnected in any way, the left portion having neither cervix nor vagina, and the right portion possessing both.

The liver reached down to the crest of the ilium, the gall-bladder was large and full. The kidneys were lobulated, of

nearly equal size, the left being slightly the larger. The heart was normal, the foramen ovale closed, the lungs were of a bright red, containing air.

The pelvis having been dissected away it was found that the pubes was deficient in the median line to the extent of one inch and seven eighths.

ADOLPH RASCH.
H. COOPER ROSE.

CASE OF EXTRA-UTERINE PREGNANCY; GASTROTOMY SUCCESSFULLY PERFORMED.

By WM. ROSS JORDAN.

THE subject of this case came under my care as an out-patient at the Birmingham and Midland Hospital for Women. She complained chiefly of shivering fits and menstrual irregularities, and expressed considerable anxiety as to the nature of her ailment, not being able to understand why she was not confined at the usual time. She gave a history of good health until marriage.

I will give the report of the case as it appears on the hospital papers.

Elizabeth G—, æt. 29, married one year, first menstruated at thirteen, and was regular until marriage. Supposes herself pregnant eleven months. Menstruation ceased two days before marriage, after which she thinks she became pregnant immediately, as she very soon began to suffer from morning sickness, &c., followed by increased size of the breasts and the abdomen. Five weeks later menstrual discharge came on, and continued slightly for three weeks. In April last had an attack said to be inflammation of the bowels, and was so ill that no hope of her recovery was entertained by the doctor in attendance. After three weeks in bed she got better, says she first felt the child in July or August, at which time she was very ill for half a

day. She expected and prepared for confinement in September, when she had a little show for one day, but still went on a fortnight longer, after which she was very much unwell for three days. From this time she got gradually smaller in size for six weeks, when she fancied she was in labour, being in great pain for three or four days, at the same time having a sanguineous discharge; has had less pain since, but has had frequent cold shivers, and has felt a cold sensation in the abdomen.

By my desire she came into the hospital the next day, the 13th December. On the 14th I made the following note:—Aspect tolerably healthy, general condition good, pulse 68, temp. in the morning 36·8° C., evening 36·3° C. or seven tenths below normal. A swelling in abdomen, central and somewhat round, though flatter than in ordinary pregnancy and not larger than is usual at six months. A little fluctuation felt towards left side. On deeper examination a round mass, answering in shape and consistency to the placenta, is found between umbilicus and pubes, a much harder projection to upper and left border of tumour, supposed to be buttocks. As the abdominal wall is not very thin these marks are open to doubt; round substance felt at right inguinal ring.

Examination per vaginam.—Cervix pushed up to right side. Sound passes three and a half inches, pointing to right groin, and moving the round body felt in the abdominal examination, uterus slightly movable, cervix hard, os closed. Recto-vaginal pouch occupied by a hard rather round mass, thought to be the occiput of fœtus. Menstruation commenced and continued three days.

On December 21st the usual consultation was held. The result was that my diagnosis was very generally controverted, various opinions being given as to the nature of the case. A puncture with the aspirator was decided upon, chloroform was given, and a quantity of chocolate-coloured fluid was withdrawn, mixed with white flakes looking like vernix caseosa. Apart from the evidence given by the fluid I felt more convinced of the correctness of my opinion when I had

the opportunity of examining under chloroform, and thought I could clearly feel the occiput from the vagina, as well as a smaller prominence which I suggested was an elbow. Recovery from chloroform was slow and imperfect. Two hours later, almost complete collapse came on, no pulse at wrist, hæmorrhage into the cyst or abdomen suspected. I had left the hospital some time, having gone on my usual duties, and was at once sent for. Death must have resulted but for the energetic and timely aid given by our resident officer Dr. Louisa Atkins, who also sent for my colleague Mr. Lawson Tait, who resides near the hospital, and who kindly did all that could be done to restore the patient. I take this opportunity of acknowledging the assistance given to me at the operation by Mr. Bracey and Mr. Tait. The latter gentleman, having just had a successful case, was enabled to give me many useful hints as to the after management of the case. Fortunately the efforts at restoration were successful, and when I arrived it was thought best to proceed at once to perform the operation of gastrotomy.

At 3.30 p.m., four or five hours after the administration of the chloroform and the use of the aspirator, methylene ether was given, and the operation commenced by making an incision four inches long in the median line down to the pubes. Having divided the abdominal wall down to the peritoneum, the cyst with the placenta under it presented. Some little separation seemed to have taken place on the right side filled by blood clot; this was removed, and passing the finger to the same side the border of the placenta was felt, and a thin cyst-wall was continued from it; close to it was a foot. In endeavouring to draw some part of the cyst with the foot near to the external opening so as to attach the two openings the thin wall of the cyst was ruptured. The foot was withdrawn, and was followed by the whole of the fœtus. In consequence of the ragged opening into the cyst and the fact that it was two inches to the right of the external opening, easily torn, and retained in this position by the placenta (which I was very anxious not

to disturb, particularly as any serious hæmorrhage must have proved fatal), some difficulty was experienced in bringing the two openings together, which was done and retained by continued sutures of carbolised catgut, bringing the cyst opening as near to the peritoneum as possible. To help to keep the parts in apposition two strong silver wire sutures were passed through the whole of the structures, one on each side, at the lower angle of the wound; another suture closed the upper part of the wound, leaving an open wound about two and a half inches, which was covered with a layer of tenax, then cotton wool, straps of plaster, and bandage. Patient rallied tolerably well considering her exhausted state. A hypodermic injection of three fourths of a grain of morphia was given. Notwithstanding the anæsthesia of chloroform and methylene ether being repeated so nearly together no sickness came on till after nine p.m., after which it continued all night at intervals of ten or fifteen minutes. She was supported by enemata of beef tea and brandy repeated every four hours. Temp. 39° C.

On 22nd, the day after the operation, she was cheerful, and certainly better than could have been expected. Temp. 37·2° C. She had during twelve hours a teacupful of cold chicken broth in form of jelly, a teaspoonful at a time. The wound was dressed, and a good deal of reddish fœtid discharge escaped; upper part of wound appears to be united. Temp. 39° C.

23rd.—A little sickness in the night, which ceased at six a.m. Comfortable day, more food taken of same kind; enemata continued. Wound dressed morning and evening, but syringed with a solution of sulphite of soda for first time in the evening. Temp. 38·1° C., though only 37·2° in morning.

24th.—Restless early part of the night; took less food; wound syringed morning and evening. Silver suture in upper part of wound removed. Temp. 38° C.

26th.—Side sutures removed.

28th and 29th.—Some small shreds of placenta came away with the injection each day; bowels moved three times; solid food given.

January 1st and 2nd.—Very large fragments of placenta, probably two thirds, were discharged.

8th.—It would be tedious to continue a daily account of the patient's progress, which was very good from this time. Syringe only used once daily, and later only occasionally.

18th.—Able to get up, wound healthy, discharge less.

25th.—Has menstruated the last three days.

February 11th.—Left the hospital, and has since gone on well. Paid a visit into the country, travelling by rail.

April 10th.—Came to the hospital looking well and stout; wound quite closed.

The only further remarks I intend to make shall be very brief. The doubt cast on my diagnosis, and the variety of opposing views with regard to the nature of the case, which unfortunately resulted in the use of the aspirator, was nearly the cause of the patient's death.

The situation of the fœtus and placenta proved to be exactly as I had described. My great anxiety was to disturb the placenta and cyst as little as possible. I therefore made no investigation as to the exact attachments, but found, as I said before, that the hæmorrhage seemed to have separated some part of the placenta on the right, and with this exception I believe no part was disturbed. The situation of the placenta, so completely in the line of the first incision, was an awkward circumstance, very much complicating the operation, the only advantage being probably the earlier separation and disintegration of its substance.

The temperature was low when she first came into the hospital, and was at no time above 39·2° C.; and on that day and the following she had a sharp attack of parotitis, which passed off without much trouble. As the temperature was below normal for three days after she came in, it may be interesting to ask if this can be taken as any test of the death of the fœtus.

NOTE ON THE DIAGNOSIS OF EXTRA-UTERINE PREGNANCY.

By Lawson Tait, F.R.C.S.,

SURGEON TO THE BIRMINGHAM HOSPITAL FOR WOMEN AND TO THE LYING-IN CHARITY; CONSULTING SURGEON TO THE WEST BROMWICH HOSPITAL.

The records of obstetric surgery are sufficiently rich in the narration of cases of extra-uterine pregnancy to make it certain that we know all its possible varieties; but the fractional proportion of the cases in which the displacement has been diagnosed and operated on during life is evidence enough that we are not yet sufficiently conversant with its diagnosis.

I venture to bring this subject before the Society because I have been fortunate enough to have seen three cases of extra-uterine gestation and to have operated in two, once successfully.

I wish especially in this note to speak of the value we ought to place on the history given by the patients in such cases, even when detailed with a minuteness that would seem to carry conviction with it; for recently, in a case under my care, when I had made a diagnosis of multilocular ovarian tumour, I was led away from my opinion by the story of the patient into the belief that it was a case of extra-uterine pregnancy, and in that belief I operated, only to find that I was right at first. Fortunately, though I removed both ovaries, the patient did well.

The diagnosis of cystic disease of the ovaries was made in this case (L. H—, æt. 38, mother of seven children) on February 19th, 1872, and she remained under care until September 30th, when she volunteered some further information about her case than had been given before. I may say that she had heard a few days previous to this of an operation for extra-uterine fœtation which I had performed, but there had been no communication with that patient

before the additional information was given. It is a noteworthy fact that in the second case (L. H—) the details of the supposed pregnancy were far more consistent with that view of the case than was the story of the patient in whom the extra-uterine gestation had actually existed. I may say further that it was the extreme consistency of the woman's story alone which led me astray, for if it had not been given I should never have regarded the case as other than one of ovarian tumour. The history given was to the intent that her tumour had existed about three years (this she had stated before); that just before that time she had believed herself pregnant, as her menstruation had ceased for eight months, her abdomen had slowly enlarged, as had also her breasts. She was also quite sure that she had often felt movements, and, indeed, had all the feelings that she had experienced in each of her seven pregnancies. One day when walking in the street she was seized by pains, exactly like labour pains, and these lasted for four hours. At these pains she felt no surprise, fully believing that she was in labour. She felt as if a child was about to pass from her, and was aware of the "swelling pressing downwards." She afterwards felt this "pass back into the belly," the pains ceasing, and her size remaining unaltered. At this false labour there was no discharge. Up to the time when I first saw her she is quite certain no diminution of her size had ever occurred, and very little, if any, increase.

The physical signs of the case were those of multilocular disease of both ovaries, and on them I need not dwell. I found it was so when I operated, and the operation was successful.

The lesson of the case is the blunder, and the moral is that we should place very little confidence in the statements of patients if they are not in harmony with physical signs. I must plead this in extenuation, that I never saw a woman further removed from any taint of hysteria, and, being an illiterate woman, there could have been no cramming up of symptoms from books.

The strongest point in her story was the arrest of menstruation for eight months, and I have had corroboration of her statement on this point. Paul Dubois states that he has never known the menses arrested by a cystic-ovarian tumour, neither have I but in this one instance.

The weak points in the story were those I did not attach sufficient weight to, and they were those alone on which we ought to place any reliance whatever. They are, that she had no "show" during the false labour, and that her size did not diminish after it. Having now almost exhausted, I believe, the literature of the subject, I am almost satisfied that these two circumstances are invariable in extra-uterine gestation which has gone past the period. The first is due to the general excitement and congestion of the organs involved, specially to the enlargement of the uterus, which is always present to some extent, and the second to the absorption of the liquor amnii after the death of the child. The complete arrest of menstruation during the period corresponding to normal pregnancy is far from being a constant condition. But even though it were, like its accompanying signs, such as enlargement of the breasts, darkening of the areolar, increase of Montgomery's tubercles, malaise, vomiting, &c., it would help us to do little more than suspect a pregnancy. Sometimes there is metrorrhagia, due to the large size and empty condition of the uterus, thus tending to the diagnosis of uterine fibroid.

The conditions with which extra-uterine pregnancy may be confused, before the death of the child, are, first, displacement of the normally pregnant uterus during the early months of pregnancy complicated with fibro-myoma or cystic disease of the uterus; and, more rarely, pregnancy of one half of a double uterus. In a case which I saw with the late Mr. Ross, of Wakefield, I diagnosed either extra-uterine gestation or a double uterus with pregnancy of one side, and it turned out to be the latter. Frequently we have considerable lateral displacements of a normally pregnant uterus, especially in unmarried women, sent to the

specialist as something very different from what they really are. Mr. Spencer Wells has told me recently that he has had two cases of this kind sent to him as extra-uterine pregnancies.

After the death of the child the diagnosis of an extra-uterine gestation is much more difficult, especially if years have elapsed.

The two points in the history I have already mentioned are most important. Auscultatory signs are then of no use, though in one of my cases, where the child was clearly dead, the placental sound was heard at my first visit, but had disappeared entirely at my second, ten hours afterwards. In this case it was confirmatory.

The other conditions with which it may be confused are as follows, and I give them in what I think their order of probability :—Pelvic hæmatocele, ovarian tumours (especially dermoid cysts), cancer, fibro-cystic disease of the uterus, hydatids of the uterus, and phantom pregnancy.

The invariable condition of the uterus in extra-uterine pregnancy, whether before or after the death of the child, is that it is intimately associated with the tumour, generally in front of it, movable to a limited extent, always enlarged before the death of the child, and remaining so afterwards if the placenta be attached, as it generally is, to the posterior surface of the fundus. The most important point is that the cervix is always quite open, in my cases almost admitting the finger. Under such circumstances, if a fœtal heart is audible, the case is clear. If not, then the character of the tumour must be taken carefully into account. If the case is seen soon after the death of the child the tumour will be soft, more or less obscure ballottement will be felt in it, and possibly a part of the child may be made out by rectal, vaginal, or supra-pelvic examination. It is at this stage that the difficulty between extra-uterine gestation and hæmatocele will occur. Hæmatoceles do not all occur quite suddenly. I have seen several cases where a monthly addition was made to the effused blood. In one such case, during the formation of

a large hæmatocele, menstruation was entirely suspended, or rather its external indications were. The tumour subsequently suppurated and discharged through the rectum, and for a while it really was a grave question to decide whether it was a suppurating hæmatocele or the suppurating cyst of an extra-uterine pregnancy. I made an exploratory incision into it from the vagina, and satisfied myself that the former alternation was the correct one, and it is now in process of cure. Periodically increasing retro-uterine hæmatocele may easily be mistaken for extra-uterine pregnancy in the later stages, and *vice versâ*.

After the absorption of the liquor amnii the character of the tumour in a case of extra-uterine pregnancy alters very much. The uterus may become smaller and more mobile, and parts of the child may be felt, especially in the rectum, such a sign at once pointing out the nature of the case. This will be especially the case in the instances of the extra-peritoneal variety. These prominences, and likewise the "bosselures," or knobs of the hands and feet, which are often felt above the pelvis, may be closely imitated by the small nut-like cysts of small ovarian tumours, and especially by the hard irregularities of dermoid cysts. These resemblances existed in the case I have narrated above to a considerable extent, but to a very much more marked degree in another case, where I removed both ovaries, one dermoid, but where the resemblances, fortunately, did not lead me astray. If the cyst be packed down in the pelvis the deception may be great and nothing but exploratory puncture by the aspirator can give satisfactory evidence. In such cases the history can be only slightly relied upon save for the two points of which I have spoken.

Slow-growing cancer of an ovary or in the neighbourhood of the uterus, especially behind it, might be difficult to diagnose by physical signs from extra-uterine pregnancy of long standing, but the history would here greatly help us. The increase would probably be steady, and if a rapid accession to the growth took place a temperature chart would settle the difficulty, for the only condition which

could induce rapid increase of the cyst of an extra-uterine pregnancy is suppuration, and this would tell its story on the chart in lines that could not be mistaken. Anything else might safely be set down as cancer. Fibro-cystic disease of the uterus could be determined as a tumour of the uterus.

CASE OF EXTRA-UTERINE FŒTATION, WITH OPERATION.

By John Scott, F.R.C.S.

E. W—, æt. 32, married thirteen years, but never pregnant, a healthy looking woman, came to the Hospital for Women April 17th, 1872, complaining of pains in the right inguinal region and across the loins, with leucorrhœa. Had always been regular, but the catamenia had then been absent ten weeks.

May 17th.—On her next visit she informed me that she had had occasionally severe pains, with perfect freedom from any suffering in the intervals. On examination the uterus gave the impression of being retroflexed, hypertrophied, and elastic. By placing her on her hands and knees, so as to raise the buttocks, the tumour could be elevated and felt distinctly above the pubes.

June 5th (third month).—Three weeks later the os could only be felt with difficulty, drawn up behind the pubes. The tumour felt more elastic, and I considered the case might be one of pregnancy complicated by some ovarian mischief.

August 7th.—In consequence of indisposition I did not see the patient again until to-day, when on examination a feeling was communicated to the finger as of fluid between it and the uterus. The pulsations of the fœtal heart were distinctly heard, 160 in a minute. As it was now clear that there was some unusual complication, I requested her to

come into the hospital, but as she felt much better she ceased attending.

January 6th, 1873.—On her admission into the hospital I received from the husband and the nurse the following account of what had occurred in the interval. On October 16th pains like labour pains came on, which continued at intervals up to the 19th, when they became so severe that her medical attendant was hastily summoned. A sedative was administered, but on the 20th violent sickness, which continued up to the 22nd, was added to her sufferings, when both pains and sickness abated, but continued in a modified degree another fourteen days, during which she had some sanguineous discharge from the vagina. At this time, January 6th, she still has some tenderness over the abdomen, which is distended as in pregnancy at the full term. Says she increased in size up to October 16th, but has not done so since. Had also felt the movements of the child up to that date. At the period when she believed herself to be at the ninth month of gestation she had again some forcing pains and a coloured discharge. The abdominal tumour now extends two inches above the umbilicus. No pulsation of the fœtal heart can be heard. The tumour feels per vaginam like the tense bag of membranes as in natural labour; the os, reached with considerable difficulty high up behind the pubes, soft and spongy. A hard body, which was considered to be the uterus, was felt in front of the abdominal tumour, on the left of the mesial line.

15th.—The sound was passed four inches, its point being distinctly felt in the body above mentioned.

At five o'clock p.m. on the 29th sudden and violent pains, which she described as bursting pains, in the epigastrium through to the back, came on, with great restlessness, faintness, and sickness. Pulse 80, no feverishness. The pains abated under an opiate, but returned at a quarter past nine with greater severity, leaving her very faint and exhausted. As the pains continued very strong at intervals of about twenty minutes, a consultation was held, at which it was decided, as she had passed through a similar attack two months

before, to wait until the next day, but to relieve, if possible, the abdominal tension by puncturing the cyst with the aspirator. This was done, but no fluid could be withdrawn, though some liquor amnii drained away during the night.

30th, 9.30 a.m.—Has passed on the whole a fair night, although some sickness came on, which was relieved by a subcutaneous injection of morphia. Pulse 90, temp. 98·6°.

8.30 p.m.—Has had occasional attacks of pain through the day; is weaker and evidently much exhausted. Tympanitic resonance over the whole abdomen, which is much distended. Pulse 135, temp. 104·2°. On consultation it was considered that an operation for the removal of the child was her only chance of life, and the patient having been brought under the influence of ether by my colleague Dr. Heywood Smith, I made a free incision through the abdominal walls, when what appeared to be the enlarged uterus presented itself, but on extending the incision upwards it proved to be an expansion of the uterine tissues over the front of the cyst from the side of the uterus. This was cut through, and on passing the hand into the cyst the fœtus was found lying with its head in the upper part. It was removed with some difficulty, caused by what seemed the contraction of the cyst around it. On opening the cyst a quantity of air escaped. Two ligatures were applied to some vessels in the cut surface, and the cavity was well sponged out. The placenta was left untouched. The upper part of the incision was closed by sutures, the lower part being left open, and the whole dressed with carbolized oil.

31st, 9.30 a.m.—Has passed a fair night, quiet and free from pain, except during sickness, which has occurred several times. Pulse 120, temp. 101·4°. One sixth of a grain of morphia was injected during the night, and she took some brandy and ice.

5.30 p.m.—Some sero-sanguineous discharge from the wound. Has been sick, but in other respects comfortable. Has taken some jelly, ice and brandy. Pulse improving in power. Temp. 101°.

10.30.—She had become very restless; a good deal of dis-

charge from the wound, and some fetid, slightly coloured discharge per vaginam. Pulse 140, temp. 103·4°. From this time she became gradually weaker. Pulse and temperature raised; the discharge from the wound more copious and fetid, although sponged out with a solution of carbolic acid. She died on February 2nd, at 7.30, thirty-one hours after the operation.

Autopsy (nineteen hours after death).—On opening the abdomen the collapsed cyst was found lying immediately under the abdominal wall, occupying the hypogastric, right lumbar, right inguinal, and umbilical regions, the lower part of the cyst being in the pelvis; it was adherent in every direction. The placenta lying in the lower and right portion of the cyst was removed without difficulty. The expanded uterine tissues in front of the cyst divided in the operation were three fourths of an inch thick. The uterus, lying on the left of the incision, measured over three inches, closely adherent to the cyst on its posterior aspect, and on the right by the thickened tissues above mentioned. A firm, colourless, fibrous clot was found firmly attached to the anterior surface of the tricuspid valve, projecting into and blocking up the pulmonary artery; the left ventricle was contracted and empty.

I am much indebted to Dr. Snow Beck for the following more minute report of the cyst and its appendages:

The preparation consisted of the uterus and its appendages, part of the rectum, some other portion of intestine, with some muscular tissue from the muscles of the pelvis.

The sac was closely adherent to the whole of the surrounding parts. It consisted of two portions, the upper one extending into the abdomen, smooth and thin, and evidently consisting only of the fœtal membranes; the lower being of considerable thickness, occupying the cavity of the pelvis between the rectum and the uterus, and closely adherent to the whole of the posterior surface of the latter organ.

The uterus lay in front and a little to the left; the body, rounded and pliant, measured 2½ inches across the fundus

and 2½ inches long; the cervix, considerably lengthened, measuring fully 2 inches. The lower portion of the sac formed with the right lateral ligament an apparently thick uniform mass; it was less closely united to the left lateral ligament, from which it could be separated. The inner surface of the whole of this thicker portion was of a tawny yellow colour, rough and uneven, and to this surface the placenta had evidently been attached, and from which many, some large, torn vessels hung down. The incision by which the fœtus had been removed was near the right side of the uterus, and had been carried through a part of the expanded uterine tissue, at least three fourths of an inch thick. A vein, with the ligature still attached, had been tied on the uterine side of the incision. In front and towards the outer part of the right lateral ligament, some seeming fimbriæ were noticed, and were supposed to indicate the position of the Fallopian tube, but proved to be veins passing from the situation of the placenta towards the pelvis. On opening the cavity of the uterus the Fallopian tube could be traced outwards to near the centre of the incision, just above the ligatured vein. Further dissection showed that the tube commenced at the incision by a minute orifice, proceeded as a very small tube outwardly more than two inches, then slightly enlarged, and this enlargement, gradually increasing for another two inches, ended in the sac by a round trumpet-shaped orifice, about the centre of the attachment of the placenta. From this trumpet-shaped orifice the structures composing the walls of the tube were distinctly continuous with the structures forming the thicker portion of the sac, which tissues could be separated from those forming the broad ligament, though closely adherent to them. Taking the thickened and dilated part of the Fallopian tube as a starting-point, it was clear that the thicker and lower portion of the sac, to which the placenta had been attached, was uniformly continuous with the structures in the walls of the tube, and the conclusion appeared clear that the lower portion of the sac was formed by the fimbriated extremity of the right Fallopian tube, much enlarged and expanded.

Nothing definite could be made out respecting the vessels on the inner surface of the cyst, nor could a lengthened and careful search discover the right ovary.

The left broad ligament was also much thickened and adherent to the front of the sac, and the left Fallopian tube was traced along the upper border, ending as a small tube at the uterus. The ovary could not be made out.

The thicker portion of the sac contained a large amount of enlarged contractile fibre-cells, some derived from the expanded tissue at the side of the uterus, others apparently from the walls of the Fallopian tube, and I have no doubt the contraction of those fibre-cells caused the resistance I experienced in the extraction of the fœtus.

CASE OF GASTROTOMY FOR SUPPOSED EXTRA-UTERINE GESTATION.

By Alfred Meadows, M.D., F.R.C.P.,

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The following case appears to me so instructive, at least, if I may judge by my own experience of it, that I am induced to bring it under the notice of this Society in the belief that, as a general rule, failures and mistakes are more profitable to thoughtful observers than successes, though, as I shall presently endeavour to show, there are in my judgment cases wherein no amount of precaution, nor even the greatest skill, can secure us against error in diagnosis. I believe that those who have had the largest experience in abdominal tumours of all kinds are least inclined to dogmatise in regard to diagnosis, for the simple but very sufficient reason that they of all others know best

what are the difficulties and uncertainties which surround these cases, and how almost every single sign or symptom of any given tumour may be falsified by actual demonstration either before or after death. The case now to be related is a notable example of the utter fallacy of trusting to a patient's own statement of the history of her case, no matter how precise and circumstantial that statement may be. It is not too much to say that a certain amount of confidence in the accuracy of this poor woman's statement was the chief determining cause of the operation that was performed, and therefore of the death which resulted from it. At the same time I must add that had no such history been forthcoming I should still have felt myself justified in resorting to some operative interference, and, that being so, it will be apparent that scarcely less could have been done than was actually accomplished. The case is as follows:

L. S—, æt. 58, was admitted under my care into the Hospital for Women on the 4th of February, 1873. She was a widow, and had had one child twenty-two years ago. Her general health had been uniformly good, and she passed through the climacteric period nine years ago with little or no disturbance. At the time of her admission she was suffering extreme pain in the abdomen, which was worse in some places than in others, and pressure generally was very painful. The abdomen was greatly enlarged by the presence of a tumour, the history of which was thus detailed by the patient herself. As I have stated she had one pregnancy twenty-two years ago, which, together with the labour, was in all respects quite natural save in this only, that during her pregnancy she continued to menstruate as regularly as before, and this she did also during the supposed second pregnancy. Six years after the birth of the first child, that is, sixteen years ago, she again, according to her statement, became pregnant; she had all the usual symptoms precisely the same as she had had before, and the only difference that she remembers was that the movements of the child were extremely free and painful. In due time the pains of labour came on; she was then living

in Southampton, and she sent for her medical man to attend her. She remained in strong labour twenty-four hours, during most of which time the doctor was with her and made frequent examinations. He, unfortunately for the completeness of the history, is dead, so that no information could be obtained from him. At the end of twenty-four hours the pains began gradually to decline, but no child was forthcoming, nor could she remember whether or no there was any discharge. During the whole of the following month pains of varying intensity and length continued; they were, she says, throughout the labour precisely the same as those she had experienced in her former labour. Gradually the intervals between the pains lengthened, until finally, at the end of about two or three months, all pain ceased, and so far as this symptom was concerned, she relapsed into her former normal condition. The abdominal enlargement, however, which had gradually, according to her statement, grown just as in a normal pregnancy, both as to size and rapidity of growth, remained precisely the same after the (supposed) labour as before; it certainly did not diminish in size; on the contrary, she inclined to the belief that during the next three months it rather increased than otherwise.

Up to this point, then, the history went to show that sixteen years ago an abdominal tumour had formed in the course of nine months which in all outward respects resembled pregnancy, which was believed to be such by the patient herself, and which we may assume was also thought to be so by the medical man in attendance, inasmuch as when the supposed labour set in, which was to put an end to the tumour by the birth of a child, the said doctor remained with her for many hours, of course in expectation of the coming child. The labour, however, passed off, no baby was forthcoming, and we are left to the conjecture as best we may what were the thoughts and impressions of the deceived attendant. Into this question I will not speculate, for the very obvious reason that, while imagination may be stimulated by such inquiry, and fancy may picture many

pleasing illusions, yet the practical bearings of the case, with which alone we now have to deal, will certainly not be promoted by any such indulgence. It is sufficient to say that from that time to the period when she came under my observation, she herself never doubted that she was still carrying the child about somewhere or other in her abdomen, and it was a kind of received tradition among her friends and relations that such was the case. It does not appear that the medical attendant ever entertained any doubt on the subject, although it must be confessed that we have no positive evidence to show what his opinion really was. We do know, however, on the statement of the patient, that he was in attendance upon her nearly the whole of one night when she was supposed to be in labour.

From the termination of the first twelve months up to May, 1872, the tumour remained in all essential particulars precisely the same; it neither increased nor diminished in size; nor did it give rise to any pain or distress beyond that which resulted from its bulk. During these fifteen years she several times sought advice for it, but she could give no information as to what opinions were formed respecting the character of the tumour.

In May, 1872, she had a severe fall and struck the tumour very sharply; after this, as well as at the time, she experienced a good deal of pain, and from that time onwards the tumour, or at least the abdomen, gradually increased in size; pain also continued with more or less severity, and there was a good deal of tenderness on pressure. The pain was described as of a darting pricking kind, and her health from this time began gradually to suffer, so that she became unable to follow any occupation. Shortly before she came under my care the pain increased considerably, and, in addition to the sharp shooting pains, she had also a good deal of bearing down, forcing pain, somewhat resembling the pain of labour, only much more acute.

On her admission, February 4th, 1873, the following was the state of the case:—The patient had all the appearance of being extremely ill and suffering great pain, as revealed in

her expression. There was a slight hectic flush upon the cheeks, the skin was perspiring and clammy, the tongue coated. Pulse 100, temperature 101° in the evening. The abdomen was occupied by a large tumour about the size of pregnancy at term, and of ovoid shape, measuring thirty-eight inches round at the umbilicus. It was extremely tender to the touch all over, apparently solid, or at least not distinctly fluctuating, dull everywhere on percussion, but resonant in the flanks, especially in the left, slightly movable, and giving no auscultatory phenomena. In some places the tumour seemed less solid than in others; in some it was distinctly elastic, but nowhere clearly fluctuating. The vaginal examination showed the vagina to be somewhat contracted; the uterus high up and immediately behind the symphysis pubis; the cervix very small, and the os represented by a small circular rim. The uterine sound passed readily upwards and forwards two and a half inches. The tumour could with difficulty be felt *per vaginam*; it certainly did not engage the pelvic cavity, though Douglas's pouch was felt somewhat enlarged and distended, but more apparently from fluid than any solid growth.

On the morning after her admission the pulse was down to 90, and the temperature to 99°, and I may remark that during the ten days preceding the operation which I subsequently performed the pulse varied from 80 to 100, and the temperature from 99° to 101°. Both were generally higher in the evening, the temperature rising usually one degree and sometimes more.

I must own that I was considerably puzzled as to the diagnosis, before hearing anything of the history which I have detailed beyond the fact that the tumour had existed for many years, that it had remained apparently *in statu quo*, and that it had lately increased rather rapidly in size, attended by a good deal of pain and constitutional disturbance. I was disposed to regard it as a multilocular ovarian tumour, which, from the blow which it had sustained, had undergone either a process of suppuration or of malignant degeneration.

When, however, I was told the history of its origin in a supposed pregnancy, my confusion was still further confounded; and though it now seemed possible that the case might be one of extra-uterine gestation which had remained quiescent for fifteen years, and had been suddenly thrown into activity by the injury it had sustained, leading, perhaps, to suppuration within the sac, I still could not recognise the characters of that condition which I should expect to find, and I was especially puzzled by the statement that no diminution occurred in the size of the tumour during the whole fifteen years, while, on the other hand, that it should not have increased in size during the same period seemed equally against the idea of its being a multilocular ovarian tumour. The supposition that it might be a fibroid of the uterus I did not seriously entertain, because I thought it most improbable, according to my experience, that such a tumour should attain this size in the short space of nine months, and then remain stationary. Moreover, as a disturbing element in all calculations founded on the supposition of a neoplastic growth, whether uterine or ovarian, was the explicit statement of the patient concerning her pregnancy and labour. Under these circumstances I declined to commit myself to any decided opinion, and accordingly I wrote in our hospital consultation book "nature of tumour very doubtful; exploratory incision recommended." The latter was suggested because the condition of the patient in my judgment required some interference for her relief, and while I apprehended no serious evil from an exploration, I looked forward to a possible removal of the tumour, whatever it might prove to be.

The result of the consultation with my colleagues showed how difficult the diagnosis was. Three of them expressed a positive opinion that the case was one of extra-uterine gestation; a fourth entertained the same belief, but with the qualification that this opinion rested on the assumption that the patient's statement was correct; while a fifth believed that the tumour was a multilocular ovary.

In this conflict of authorities only an exploratory incision

could clear the matter up, and, looking to the condition of the patient, I felt that this was the proper course to adopt. Accordingly, on the 15th of February, the patient being under the influence of chloroform, I made an incision about five inches in length along the mesial line, between the pubes and the umbilicus. As soon as the abdominal wall was cut through I came upon a white friable mass having all the characters of malignant disease; it broke down easily under the finger, and on pushing the finger a little way into it about two ounces of thick brownish fluid came away, apparently from some small cystic cavity. On introducing my finger into this space it gave me the impression of being a cyst of a multilocular ovary, and, looking to the fact that that which was visible was evidently malignant, I had no doubt that the whole tumour was of the same character; it was further demonstrated that this malignant mass was completely adherent to the abdominal parietes, and under the circumstances I determined to proceed no further. In this decision my colleagues all agreed, and we were unanimous in the opinion that the tumour was malignant, though it was doubtful where the tumour had originally developed; some thought it still possible that it originated in extra-uterine pregnancy, and that perhaps only the cyst had undergone malignant degeneration. My own impression was that the tumour was ovarian, probably multilocular, and that it had lately become cancerous; this opinion I believe was entertained by several gentlemen who were present at the operation.

The abdominal wound having been carefully brought together, broad straps of adhesive plaster were applied and the patient was put to bed. The operation was performed at 10 a.m., on the 15th; throughout that day she remained fairly comfortable, the pulse did not exceed 96, and the highest temperature was 99·8. Next day violent sickness and diarrhœa came on; the expression became pinched and anxious, the skin clammy and cold, the pulse rose to 130, and the temperature to 103°, and it was evident that death was impending; she lived, however, to the following day and then died, just fifty-three hours after the operation.

The *post-mortem* examination was made next day. On opening the abdomen a strange contradiction to all our anticipations was revealed. The mass of malignant disease that was found at the operation proved to be the omentum which overlapped the tumour and was about an inch in thickness; the only other indications of malignant disease were in the mesenteric glands, which varied in size from a nut to an egg; the peritoneum was covered with thick, rough, and apparently old lymph. A good deal of flaky purulent-looking lymph also existed in the peritoneal cavity, and there was much thick dirty brown fluid; the tumour itself was adherent everywhere; in front to the cancerous omentum, the abdominal wall, the bladder, and the intestines; the latter were curiously white and friable and were very easily torn. On removing the tumour together with the pelvic viscera it was found to be a large fibro-cystic tumour of the uterus. During life the uterine sound gave a measurement of only two inches and a half, but it was now found that this was the length of the cervix alone; that an obstruction existed at that point from the encroachment of the tumour, but beyond that was the uterine cavity which was spread out and flattened as it were over one side of the tumour, and measured altogether with the cervix five and a half inches. The greater portion of the tumour was a solid fibroid as large as an adult head, and weighed nine pounds and a half; it had evidently grown from the left side of the uterus and could be easily enucleated from its bed; the thin uterine wall could be traced as a kind of membranous covering over the greater part of the tumour, but was gradually lost at its upper part: here there was one large cyst about the size of a fœtal head, which was filled with a thick creamy sort of fluid, and contained a good deal of yellowish flaky purulent lymph, which closely resembled that found in the peritoneal cavity. The membrane which enclosed this cyst on its free aspect was extremely thin and perfectly white.

Now, that nothing at all approaching to a correct diagnosis was arrived at by any of those who saw and examined the patient is evident from the foregoing history; not only so,

but even the exploratory incision, which is usually held to be sufficient to clear up any doubtful case of abdominal tumour, failed of its usual certainty. I can well imagine that most of those who now for the first time hear the details of this case, and who know, therefore, what I did not, what was its true nature, will be led to exclaim, how could such a mistake or mistakes have arisen? Where is the evidence in support of either of the hypotheses arrived at? What terrible blundering and careless clinical observation there must have been when the real character of the disease was so signally overlooked! To all such remarks I will only reply by asking the question, which is the avowed object of my bringing forward the case, viz., how can such mistakes be avoided? It is easy enough to be wise after the event, and it is a pleasant satisfaction to some to think that such an error could not have occurred in their own practice, but they would be puzzled, I think, to tell me definitely how they would have prevented it. The final history of the case, however, teaches us all some lessons which ought to, and I believe will, make such mistakes less and less frequent. I am convinced that if any one had the moral courage to write a book descriptive of all the mistakes in diagnosis and treatment which he has made, the reasons for the mistakes, and the lessons to be learnt by them, he would prove himself to be one of the greatest benefactors, and his book would be not only most interesting but most popular also.

The first lesson that I learnt from the foregoing case is the utter unreliability of a patient's statement. There is nothing very new, perhaps, in this, but I have seldom seen a more remarkable illustration of the untrustworthiness of such evidence than this case affords; and certainly if no such statement had been made I do not think that the idea of extra-uterine gestation would have occurred to the mind of any of those who examined the case. At the same time it should also be said that there was nothing about the condition of the tumour which absolutely negatived such a diagnosis, so that, assuming the patient's statement to have been correct, there was nothing unreasonable in the supposition. Perhaps the

strongest point against this view was the fact that the tumour had remained the same size from the end of the first to the completion of the fifteenth year. This was very remarkable, because, as we know, extra-uterine tumours generally diminish considerably in size after the full term of gestation by the absorption of some part of the contents of the sac. On the other hand, the alleged stationary condition of the tumour for fully fifteen years told equally against every other form of abdominal tumour; it told particularly against the idea of an ovarian tumour; and also, though less so, perhaps, against the supposition of a uterine tumour. Moreover there were no symptoms, as regards the uterine functions, which led one to suppose that that organ was at fault.

So far as the tumour itself was concerned, the extreme tenderness made all examination of it difficult, and the results very doubtful. It did not appear to be throughout of the same consistence, the upper part felt elastic, and here the cyst existed; the rest seemed solid but of varying firmness, due no doubt to the true fibroid character of the greater part of it, and to the softer malignant omentum which overlapped it in front. There is nothing in all this that militated against the ovarian character, while it might equally have been an old-standing extra-uterine pregnancy, but in reality, as we have seen, it was neither; there was little or no mobility, but there was resonance in both flanks. From all this I am, I think, justified in saying that the examination of the tumour itself gave no positive indication of its true nature.

Was there, then, anything in the history and symptoms, subsequent to the fall and injury, which ought to have made the diagnosis clear? I believe not. The symptoms were those, and only those, that would have resulted from the injury of any tumour, giving rise to inflammation and possible suppuration; these were—some increase of size, severe pain and tenderness on pressure, and serious constitutional disturbance. All these might have occurred equally in the case of an ovarian tumour, an extra-uterine gestation, or, as was the case, in a uterine fibro-cystic growth. I know of no

symptoms by which these several tumours can be differentiated when once they have sustained an injury of such a kind as to give rise to constitutional disturbance; indeed, the difficulties of diagnosis were no doubt increased by the supervention of the acute symptoms; while at the same time it was for these, or owing to these, that any active interference was contemplated.

Humiliating, then, as it may seem, I feel bound to express my conviction that in such a case as this absolute certainty in diagnosis is not in the present state of our knowledge attainable. But I was not prepared to allow that even an exploratory incision may not only fail to establish the diagnosis, but may positively mislead, as it did in this case. Many men of experience in abdominal surgery witnessed this operation, and so far as I know they were unanimous in the belief that the whole tumour was malignant; indeed I do not see how any other opinion could have been entertained. Yet here again an error was committed, for the tumour itself was of the most benign kind, and only the overlying omentum was cancerous. In any case, however, the result must have been the same, for under no circumstances could the tumour have been safely removed. I shall be glad indeed if the discussion upon this case elicits any new facts from the experience of others which may make mistakes of this kind, if not impossible, at least extremely rare. I would wish it to stand forth as a beacon to others, and I bring it forward in the firm conviction that it is a moral duty which we owe to others to record our failures as well as our successes. I am quite sure that much more may be learnt from the former than is likely to be taught by the latter.

Dr. Tilt was not aware whether there was on record a case of primiparous extra-uterine pregnancy, but he was struck with the fact that it generally occurred in women of mature age, who had been repeatedly confined, and a previous bad labour or a bad getting up is often distinctly noted. He considered that it was easy to understand why it should be so, for puerperal pelvi-peritonitis sets up salpingitis, and inflammation so damages the delicate plicatures that line the oviducts, that the fertilised ovum

cannot slip through them, even if the uterine openings of the oviducts be not obliterated, as is distinctly mentioned in many of the most trustworthy cases.

Dr. Edis agreed with the observation of Dr. Meadows, that too much reliance should not be placed on the subjective symptoms, the objective being far more trustworthy. In this instance the latter were so obscure and the former so precise that the diagnosis arrived at was based principally upon them, and the sequel showed with what result. In Mr. Lawson Tait's case the fact of both ovaries being implicated and menstruation suspended was a source of fallacy not usually met with, and, no doubt, increased considerably the difficulty of diagnosis.

Mr. Lawson Tait said that one point seemed in Dr. Meadows's case to have had its importance overlooked; he referred to the absence of retro-uterine fulness, or rather the absence of a solid tumour there. Having gone over the ground very carefully, he was quite prepared to say that there were only two varieties of extra-uterine gestation, the one being that when only the walls of the Fallopian tube were ruptured and its peritoneal covering left intact, the embryo being subsequently developed in the substance of the broad ligament. This constitutes the variety so frequently described by continental authors as *sous peritoneo-pelvienne.* The other variety is really only a recent stage of the first, when the peritoneum has given way as well as the tubal walls, and it is by far the more common. In this the fertilised ovum escapes into Douglas's pouch, and there receives a peritoneal attachment and becomes developed, as we know that unfertilised ova also do. From this view it would be impossible almost to imagine a case without a retro-uterine tumour, giving to the finger a feeling of cystic ballottement previous to the absorption of the amniotic fluid, but after that feeling solid. In his (Mr. Tait's) own case, where the history had led him astray, he had not made it sufficiently clear that menstruation had ceased for eight months, and then was resumed, continuing with perfect regularity until the removal of the tumours. In two other cases where he had removed both ovaries menstruation was uninterfered with. He should like to hear Mr. Spencer Wells' experience on this point.

Mr. Spencer Wells said he had only seen one case of extra-uterine fœtation. That case was recorded by Mr. Cooke in one of the early volumes of the 'Obstetrical Transactions.' It was remarkable as being a twin pregnancy, an intra-uterine and an extra-uterine fœtus going on together up to the full term of pregnancy, and the intra-uterine fœtus being delivered in the ordinary manner. He had seen several supposed cases of extra-uterine pregnancy, but in nearly all the source of fallacy was extreme thinness of the uterus and of the abdominal walls. He had not

found irregularity or suppression of menstruation at all uncommon during the progress of ovarian disease, nor was it rare for disease of both ovaries to go on while menstruation continued with perfect regularity. In two cases, after removal of both ovaries, menstruation (or a periodical sanguineous discharge from the uterus, which might be called uterine epistaxis or metrostaxis, but which did not differ from normal menstruation in any way appreciable to the patients) had returned and recurred at several successive months.

Dr. Heywood Smith remarked that besides the solid or fluctuating swelling generally felt in the post-uterine region, there was the sensation of an intermediate consistency when the placenta itself occupied Douglas's pouch, and could be easily felt there.

Mr. Scott agreed with Mr. Lawson Tait that a tumour in Douglas's space was a very important and constant diagnostic sign of extra-uterine fœtation; but he differed from him as to its being ordinarily solid. On the contrary, in the cases that had come under his observation the tumour, post-uterine, felt cystic, and, in his case just read, it was remarked that as the ovum became developed, so the tumour became more cystic. Of course, should the fœtal head or the nates lie in the pelvis, the presenting tumour would be solid; but even then he had found that during the pains the presenting part, distended by the liquor amnii, had a decidedly cystic feel.

JUNE 4TH, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—29 Fellows and 3 visitors.

Books were presented by Professor Fabbri and Dr. Domenico Bomba.

The following gentlemen were admitted Fellows of the Society:—Dr. John Chalmers, Dr. N. Goodchild, Dr. W. B. Lindsay, and Dr. George Mendenhall.

The following gentlemen were declared admitted:—Dr. J. R. Chadwick (Boston, U.S.); Mr. Frank W. Cooper (Leytonstone); Dr. R. Gray (Armagh); Mr. Philip W. Jones (Enfield); Mr. C. S. Ticehurst (Hastings); Professor Trenholme (Montreal); and Dr. Thomas Webster (Bristol).

Thomas Eyton Jones, M.R.C.S. (Wrexham), and James Stewart, M.D. (Whitby), were elected Fellows of the Society.

The following gentlemen were proposed for election:—Dr. Jas. Henry Bennett, Dr. Francis Davison, Dr. Simon Fitch, Mr. R. H. Moore, and Mr. Richard Wilkins.

The PRESIDENT said,—It is my painful duty, gentlemen, to inform you of the sudden death of Dr. Tyler Smith, which occurred last Monday. You are all of you well acquainted with his earnest devotion to the interests of this Society, and you will fully realise the loss it has sustained. Some time hence I shall have to tell you what he did for science and for us; I have only now to add that your Council has decided that we should at once give expression

to our heartfelt sympathy for the widow and the relatives of our deceased founder, and I now call on Dr. Barnes to read the resolution he has been asked to move.

Dr. Barnes said the Society would be anxious to record in the most emphatic manner possible its sense of the loss they and obstetric science had sustained by the death of Dr. Tyler Smith. He would not obtrude any reflections upon his conspicuous merit as an author and practitioner. He would simply refer to the deep debt which the Society owed to him for its foundation, for his constant work in scientific memoirs, in debate, and in the administration of its affairs. His conduct towards the Society had throughout been directed by the single object of promoting its welfare. Thus, at its foundation, he had postponed his own prominent claim to be the first President, in order to secure for it at starting the prestige of Dr. Rigby's popularity and reputation. Not only had he done this, but he had strenuously promoted the re-election of Dr. Rigby for a third year. He concluded by moving the following resolution :—

"That the Obstetrical Society of London having learned with deep regret the death of Dr. Tyler Smith, its founder, hereby records its sense of the loss this event has occasioned to this Society, to science, and to humanity, and respectfully expresses its heartfelt sympathy with his widow and family in their affliction."

Dr. Madge seconded the resolution, and after speaking in very high terms of Dr. Tyler Smith's abilities and attainments, he mentioned some personal experiences and recollections, as instances of the tact and firmness, combined with much kindness and consideration for the feelings of others, with which Dr. Smith, when President, was accustomed to preside over the meetings of the Society.

After passing the foregoing resolution, the Society, desirous to show in the most emphatic manner its respect for the memory of its founder, postponed its ordinary business and adjourned.

JULY 2ND, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—34 Fellows and 3 visitors.

Books were presented by Dr. Belina, Dr. Bertin, Dr. Mattei, Dr. Mendenhall, and Dr. Spiegelberg.

Dr. Thomas Savage (Birmingham) and Dr. H. C. Martin were admitted Fellows of the Society; and the following gentlemen were declared admitted:—Mr. Francis Seymour (Odiham), Dr. J. H. Finegan (Liverpool), Mr. T. Eyton Jones (Wrexham), and Dr. James Stewart (Whitby).

The following gentlemen were elected Fellows:—J. Henry Bennet, M.D., Francis Dawson, L.R.C.P. (Armagh), Simon Fitch, M.A., M.D. (Portland, Maine), Robert H. Moon, F.R.C.S. (Norwood), Richard Wilkins (Madras).

Dr. J. Goldsmith (Worthing) was proposed for election.

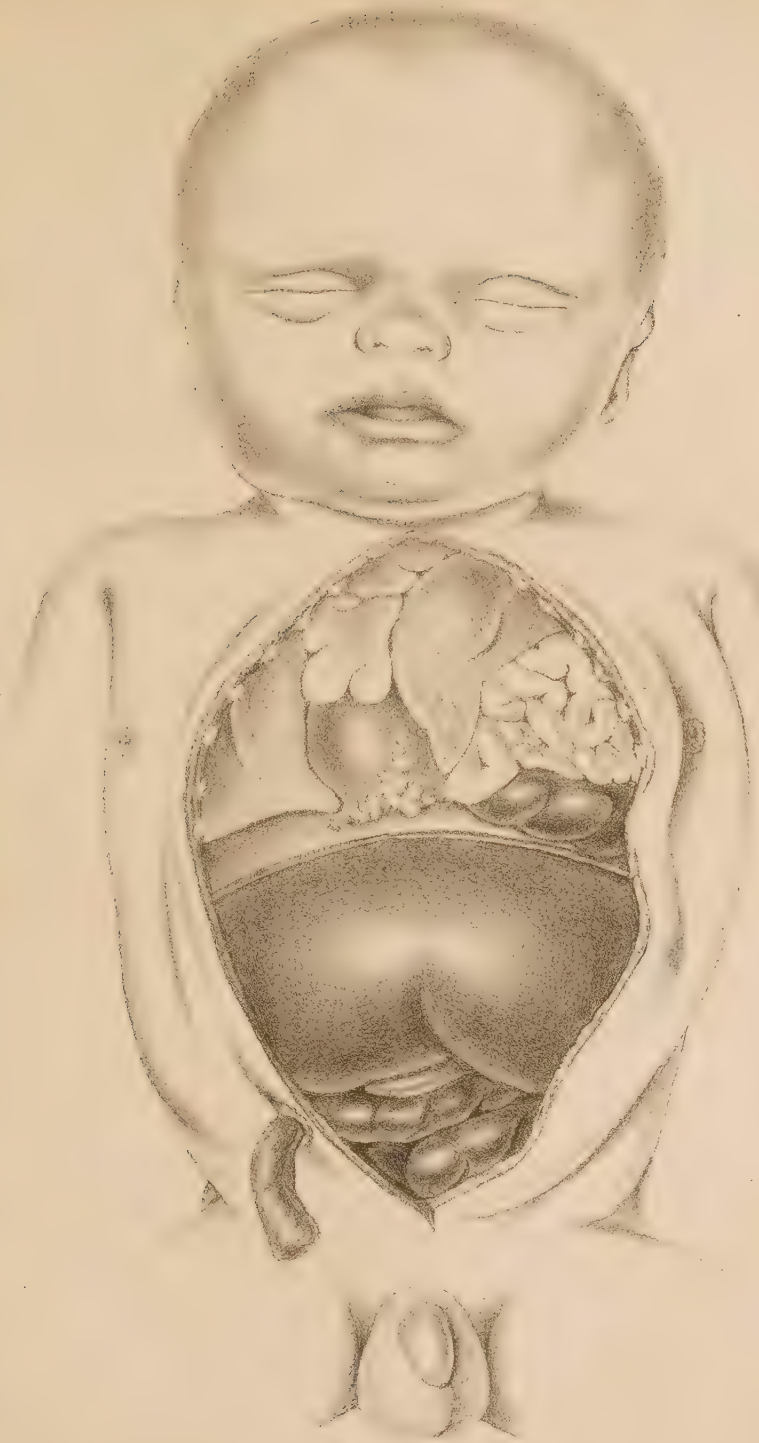
The PRESIDENT congratulated the Society on the re-admission of Dr. Henry Bennet, the importance of whose scientific work could be best estimated by the very different character of the books on diseases of women published before and after 1845, when Dr. Bennet published his little work 'On Inflammation, Ulceration, and Induration of the Cervix.' In that work he taught the profession of this country the two great lessons he had learnt in the Paris hospitals:—1st. That diseases of the womb must be studied,

like any other diseases, by every available mode of investigation. 2nd. That the treatment of diseases of the womb should be, to a great extent, surgical. These views have been adopted by all the eminent men who have written in English on diseases of women since 1845, however much they might otherwise differ; and there has thus grown up a school of gynæcology, consisting of English and American as well as Scotch and Irish authors. He considered this English school of gynæcology to be more rich and varied than that of other countries; and as Dr. H. Bennet was its founder, it was a matter of congratulation for the Obstetrical Society that his unexpected recovery again enabled him to take an active part in its labours.

Dr. Heywood Smith exhibited a fœtus with a Diaphragmatic Hernia. It was a male, born at the British Lying-in Hospital on Saturday, May 31st, 1873. The mother was twenty-nine years of age, and this was her fifth child. The first had been born in the hospital and lived one hour; the next three were born dead, and this one lived three quarters of an hour. The mother had been under Dr. Heywood Smith's observation as an out-patient at the Hospital for Women last year, when he diagnosed her pregnant with a dead fœtus at eight and a half months.

On hearing that this child had only lived three quarters of an hour he opened it, when the following peculiarities presented themselves:

In the abdominal cavity the liver was fairly normal; a prolongation posteriorly passing upwards was imbedded in the diaphragm. The stomach was lying nearly perpendicularly; there was only a short portion of small intestine and about the lower half of the large intestine in the abdomen. On opening the thorax all the rest of the intestines were seen occupying its left side. The heart was placed centrally and so had encroached upon the position of the right lung, hindering its development, while the left lung was rendered even much smaller by the large space taken up by the intestines. On lifting up the intestines they were found to



Dr. Westmacott del.

W. West & Co. imp

have passed upwards through an opening in the left posterior aspect of the diaphragm just large enough to admit the tip of the little finger. To the right of this was seen the spleen dipping into and filling a sort of pocket at the posterior margin of the diaphragm.

The parts have not as yet been more disturbed, as it was thought better to exhibit the specimen to the Society before it had been more interfered with.

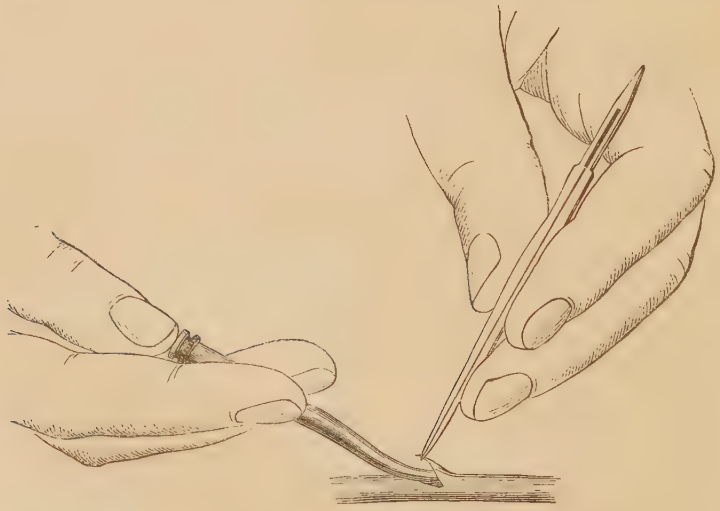
In the 'Histoire des Anomalies de l'Organisation,' by M. Geoffroy Saint-Hilaire, Fig. 1, Pl. II, shows a similar case, with the intestines, however, occupying the right side of the thorax. M. Saint-Hilaire remarks upon the peculiarity of the opening being on the right side, notwithstanding the presence of the liver. But the best illustration of a similar case is to be found in a work by Dr. W. Vrolik, 'Tables to Illustrate Embryogenesis.' In that case the child lived twelve days. The opening was also on the right side, and the heart slightly deflected from its normal position.

Dr. Squire exhibited an earthenware bedpan modelled by Phillips, of Oxford Street, on the design of a nurse, to allow of free ablution; also a linen breast-supporter invented by the same nurse and found to be very useful and comfortable at the commencement of lactation. In the smallest size the back piece, five inches deep, is twelve inches across, with a hollow for the arm, the upper edge ending in a shoulder strap; to the lower edge at each end is fixed at right angles a band two inches deep and eight inches long to button in front; a triangular piece with rounded base is joined to all the upper margin of this band, the apex fastening to the shoulder-strap by tape and eyelet holes to regulate the amount of support required. It is of use in retaining any application *in situ*, and it proved a most valuable aid in the cure of a troublesome intertrigo, where, though it was easy to prevent contact of the tender surfaces in the day, it was almost impossible without some such contrivance as this to guard against it during the night. In this case the measurement across the back was twenty-four inches, that of each

of the bands to meet in front thirteen inches. There are several intermediate sizes. The pattern is registered, and at present only to be obtained of the inventress, Mrs. Wicker, 42, Southwick Street, Hyde Park.

Dr. Heywood Smith did not know whether Dr. Squire was aware that there was a bed-bath made by Maddox in University Street, which was exceedingly convenient, allowing a patient to be washed easily without wetting the bed. It was made of tin, and had a pad for the seat, and was much lighter than the bedpan now exhibited by Dr. Squire.

Dr. Aveling showed a drawing demonstrating what he considers to be the best mode of opening the vein so as to enable the operator to pass a tube into it with ease in Transfusion. He stated that he had transfused blood a second time by the immediate method, and that this plan of opening the vein was the result of his further experience.

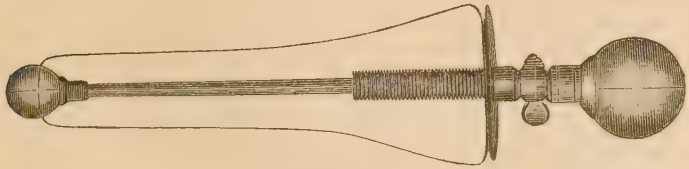


He seizes the exposed vein with a pair of fine forceps and incises it so as to form a V-shaped flap. Although the opening thus made may become obscured by blood it is still

readily to be found by using the forceps as a director and passing the tube down it into the vein.

Dr. THOMAS SAVAGE remarked that, in a case of transfusion which had occurred in his practice, and had recently been published in the 'British Medical Journal,' he had used Dr. Aveling's syringe. He found no difficulty in opening the vein nor in inserting the nozzle, as he first of all exposed the vein by transfixing the skin and then passed a probe under it. It seemed to him that nothing could be simpler or more successful than using Dr. Aveling's syringe according to the directions given. The case terminated fatally on the tenth day, but the operation of transfusion was, *per se*, a complete success.

Dr. PROTHEROE SMITH exhibited his pneumatic india-rubber tube for facilitating the introduction of cylindrical specula. He remarked that, with every care, there was often experienced a difficulty in using the ordinary speculum without giving pain. The plug he now brought before the Society obviates such difficulty and distress; it consists of an india-rubber ball at either end of a tube, on which a shield travels on a screw so as to be adapted to specula of



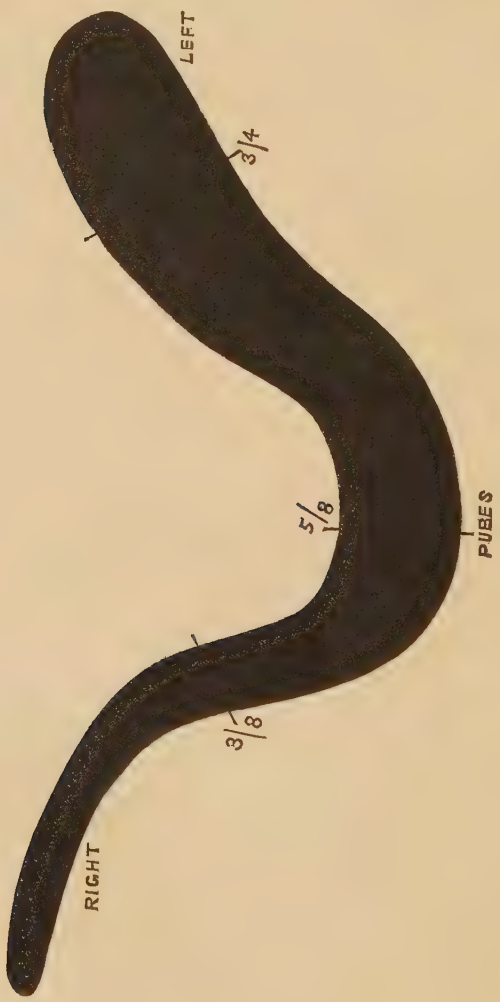
different lengths. The ball at the distal end of the tube is thin and flaccid, and is made to project slightly beyond the speculum. When inflated (by compressing the larger ball at the other end of the tube, at the same time stopping the air-hole in it with the thumb) it forms soft elastic cushions by means of which, when greased, the speculum is easily introduced without any pain to the patient.

A CASE OF CÆSAREAN SECTION.

By R. P. Harris, M.D.,
PRESIDENT OF THE OBSTETRICAL SOCIETY OF PHILADELPHIA.

(Communicated by Dr. Hicks.)

The accompanying diagram represents the superior strait



of the pelvis of Fanny P—, æt. 35, 3 ft. 6½ in. high. She was born in America, of English parentage. Operated upon by Cæsarean section Nov. 11th, 1869, at Ann Arbor., Michigan, by Prof. Abram Sager. Died of shock and exhaustion in twenty hours. Child saved. The distortion of this pelvis was owing to rachitis.

A CASE OF HYPERTROPHIC ELONGATION OF THE CERVIX UTERI AT THE FULL TERM OF PREGNANCY.

By George Roper, M.D.,
LATE SURGEON TO THE ROYAL MATERNITY CHARITY, LONDON.

E. C—, æt. 22, married one year, a primipara, was taken in labour on the morning of November 3rd, 1866. She was a patient of the Royal Maternity Society and was visited by one of the midwives of the Charity at 12 o'clock on the night of Saturday, November 3rd. At 2 o'clock a.m. of Sunday she was seen by my partner, Mr. Hopkins; the membranes ruptured naturally at 3 a.m., and at 7 o'clock the same morning I saw her myself. She was then in active labour, the pains being strong and frequent. The cervix uteri protruded from the vulva to the extent of about three inches; it was in circumference about the size of an ordinary adult male wrist, the portions without and within the vagina measuring about four inches in length. The canal of the cervix would just admit the forefinger, but no presentation could be felt; the canal was too long to allow the finger to pass up to its uterine end. After reducing the cervix within the vagina, by a certain amount of compression with the finger upwards along the canal, the fœtal head could be felt; but the presentation could not be felt while the cervix was permitted to protrude externally, and this it had a tendency to do with each pain.

The structure of the cervix had a firm, hard and gristly condition, and there seemed to be no probability of its expansion under natural efforts of the uterus. She was visited by Mr. Hopkins and myself several times during the Sunday, and at 9 p.m. of the same day Dr. Barnes saw her

with us. She had now at this time been in active labour about thirty-six hours. The condition of the lower part of the cervix was much the same as it had been during the day; there were, however, some slight indications of a funnel-like

expansion at the uterine end of the canal. As there were no symptoms of exhaustion and the pains were not so strong as to endanger the integrity of the uterus, Dr. Barnes advised further delay, but suggested, in the event of the expansion above not going on satisfactorily, free incision of the lower part of the cervix. Expansion of the os internum progressed but slowly, and after waiting four hours I made seven incisions in the os externum, equidistant from each other and extending an inch and a half upwards from its edge. The lower part of the cervix had not become soft nor tumid, but remained hard and cut with a gristly sensation. Little or no blood or serosity escaped. After this operation a gradual dilatation took place, occupying sixteen hours. At the end of this time she became somewhat exhausted, and Mr. Hopkins easily delivered her with forceps, the natural expansion above having nearly met the incisions from below. The duration of labour was fifty-two hours. The child was alive and the mother made a good recovery; much as after an ordinary labour.

This case was one of no little anxiety. The condition of the cervix pathologically I shall make no remarks upon, but deal with it only as a difficult case of practical midwifery. The prospect that such a cervix, at full term, would dilate so as to allow of safety to the mother and the child was discouraging. I had had one case of a similar kind, reported in the seventh volume of the 'Obstetrical Transactions.' To this case I was not called till the patient was in a very serious state of exhaustion; the indications for immediate delivery were so urgent and the canal had become so largely expanded, yet not so wide as to admit of delivery by forceps, that I determined to deliver by craniotomy as affording the best chance for the mother. She died, however, some ten or twelve days afterwards of pyæmic pleuro-pneumonia, doubtless as a result of a local condition of the os and cervix uteri, caused by the bruising and long-continued pressure of their structures. In this case if the expansion above had at an early stage of labour been met by incisions from below, the long-continued pressure, bruising, and almost fatal exhaustion would have been pre-

vented. The method of treatment in such cases, taking these as examples, would seem to be defined, viz., wait till expansion takes place above and then meet it by incisions from below. Such a hardened cervix would scarcely be amenable to treatment by means of water or air bags or tents of any kind. Two months after delivery I examined the cervix and uterus. The latter was fairly involuted, and the cervix proper was but slightly larger or longer than natural. That part of it, however, which had been so elongated and hypertrophied hung down in the vagina like a shrivelled piece of skin; it was soft and flabby, resembling the end of a hose or a long prepuce attached to the end of the cervix.

As I was going abroad for a long time I directed her to see Dr. Barnes with a view of having the cervix circumcised. She, however, went to a hospital near where she was living, and the now atrophied extremity of the cervix was removed. She has since had several children after easy labours. Removal of the elongated cervix a few months after labour, when it has become shrivelled and atrophied, is I believe important, as in a subsequent pregnancy it would again become developed (concurrently with uterine evolution) into a thick and hard structure, and present the same difficulty in a future labour. Cases of this kind are exceedingly well represented in a figure at p. 257 of the 2nd edition of Dr. Barnes's 'Lectures on Obstetric Operations.'

Dr. Brunton thought that in this case great benefit might have arisen from putting the patient in the knee-elbow position, as applied in cases of prolapse of the cord. He had had such a case in a multiparous woman, and applied the knee-elbow or postural method with marked success, the prolapsed uterus passing into its natural position, and labour terminating in a short time.

The President wished to know what was the effect of pregnancy on preternatural elongation of the cervix—whether the result of puerperal tissue transmutations was to shorten it, in a manner analogous to that softening of a hard cervix which he had repeatedly seen to follow pregnancy?

Dr. Playfair asked whether in pregnancy occurring in con-

nection with hypertrophic elongation of the cervix, the whole tissues of the cervix became softened and pulpy as in ordinary pregnancy? The point was of importance, because, if the cervix in its whole length did so soften, we might more reasonably hope to succeed in opening it up by the fluid pressure of dilators. With regard to incisions it was only right to remember that incisions in such a case as was represented in the diagram, and in ordinary cases of rigid cervix, were very different things. In the latter the cervix was stretched and thin; then incisions would be merely linear. In the former each cut would be the entire length of the hypertrophied cervix, in this case nearly four inches, and the risk of septic absorption would be, of course, materially increased. In making this observation he had no intention of criticising the practice adopted, as indeed the diagram seemed to show that it afforded the only means of overcoming a very formidable difficulty.

Dr. Protheroe Smith said that he had for many years been in the habit of incising the thin but resisting cervix uteri when forming an obstacle to the progress of labour, not only in cases similar in structural disease to that just cited, in which a general induration formed the point of resistance, but in others when the cervix generally was distended so as to form almost a membranous covering to the presenting head, with a rigid annular edge, like a tense lute-string. In no case in which he had operated had he found the wound to extend afterwards beyond his incision. This he made with a small thin knife, with a cutting edge of only three-quarters of an inch, which, lying flat on the index finger, was when required turned on edge during a pain and the resisting part was thus divided. As suggesting a remedy in cases similar to that before the meeting, he could mention a rare though not an unique case which he had attended with the late Dr. Rigby, when associated with him, many years ago, at St. Bartholomew's Hospital, before the days of Barnes's bags and when dilatation of the cervix was not so usually practised. In this instance the cervix had long resisted the labour notwithstanding constant and strong pains. Suddenly the head descended on the perinæum, but was retained there, in spite of constant and severe uterine contractions, till the child was precipitantly expelled, carrying around its neck the vaginal portion of the cervix, which was about the thickness of the little finger, cleanly amputated as though by a knife. When such operations were required he advocated the plan of cutting *only* laterally at the commissures of the labia uteri so as to avoid wounding the peritoneum, as well as to lessen the risk of such injury to the part so treated as might lead to septicæmia and its consequences. In reply to Dr. Murray, he desired to correct that gentleman's impressions as to what he had stated, believing that otherwise Dr. Murray's observations

might lead to serious misconstruction. He begged therefore distinctly to deny that he had given any grounds for the notion that he used the knife when labour was arrested simply by an œdematous anterior labium uteri. He would refer to his previous statement, that it was only in cases of general induration from structural disease, or when the thinned uterus presented a resisting annular edge like a tense lute-string, that the operation of incision was called for. He would distinctly say that not only he but many other practitioners had long pursued this mode of practice with complete success. He had always taken the precaution afterwards of using the uterine douche freely to prevent absorption of putrid lochia, and he had never seen one instance in which injurious consequences followed, but on the contrary the most unexceptionable good. These remarks were the result of experience extending over a period of more than thirty years with a large field of observation.

Dr. Madge said it was generally supposed that laceration of the cervix uteri during labour, without any ill consequences following, was a common occurrence. That being the case there was not so much to fear in making incisions in the cervix when rigid and unyielding.

ON THE FILLET OR LOOP AS AN OBSTETRIC AID, WITH ESPECIAL REFERENCE TO A NEW MODIFICATION OF THE INSTRUMENT.

By R. Eardley-Wilmot, M.B. Lond.

There is a fashion in all things, and our art is no exception to the rule. Each year sees the introduction of new instruments, or the modification of old ones. Many of these changes represent real progress and improvement; others merely the fashion and fancy of the day, soon to be again, in their turn, replaced and superseded.

The fillet or loop is an instrument of great antiquity, but has of late fallen almost into disuse, its merits and utility being very imperfectly recognised. It is treated in

our text-books either with silent contempt or unqualified condemnation, as an obsolete and almost useless relic of the earliest infancy of obstetrics.

Let me give you a few quotations:

Dr. Campbell says, "The fillet cannot be applied without considerable difficulty;" and, further on, that "this invention has long ceased to be employed in practice, and scarcely deserves even a brief notice."

Dr. Ramsbotham says, "It is an instrument now properly discarded in head presentations, and deserving but very little consideration."

Sir J. Simpson says, "It is difficult of application; it acts only on one part, and may cut the neck."

Dr. Merriman publishes a case intended as a scarecrow, in which the use (or, as I should say, the abuse) of the fillet resulted in great injury to the child, by a blundering practitioner of a past generation.

Dr. Barnes gives a more guarded opinion. He says that the fillet has lost its place in scientific works, but is largely used by some practitioners. He adds that he has never used it himself, being accustomed to rely on the forceps, which he considers a superior instrument.

Dr. Churchill evidently considers the fillet beneath contempt.

In spite of this formidable array of adverse opinions, I believe that there is much to be said on the other side, and that this wholesale condemnation is undeserved and exaggerated. At any rate, I hope to show that the above dangers are not associated with the fillet in its newest form.

I propose to enumerate, as briefly as possible, the chief advantages which I claim for this instrument, with a few statistics, and to show by what means the disadvantages under which it has laboured may be reduced and avoided. There are a large number of cases of labour in which serious delay occurs in the latter stage, the head being arrested at or near the outlet of the pelvis by uterine inertia, slight contraction of the bony structures, or rigidity of the vagina and vulval orifice. Many of such cases will be primiparous

patients. We have here a complication which, without threatening the life of the patient, will seriously exhaust her strength and retard her convalescence. The time of the practitioner, too, is tediously wasted in watching the slow operations of nature.

In the present advanced state of the science of operative midwifery it will be universally conceded that interference is necessary, or at least highly desirable, under such circumstances. It is here that the fillet, as a minor instrument, meeting a minor difficulty, finds its most useful application. In many such cases, where slight additional expulsive force is alone required, mere gentle traction on the head, the loop being fixed beneath the chin of the child, will so augment the force of the uterine pains, that delivery will soon be accomplished.

In more complicated cases, where some slight force is required to aid the extension movement of the head, delayed on the perinæum, such force may be fearlessly applied by the fillet. Many a ruptured or fissured perinæum might be saved by its timely application, the head being drawn gently forwards over the stretched and endangered part.

In occipito-posterior presentations the fillet, applied over the occiput, may be used with great advantage and without risk or difficulty. It is equally applicable in some cases of face-presentation and to the after-coming head in breech or feet presentations. As a general rule it may be applied with perfect safety in any case where (delivery being desirable, and no serious obstacle existing) the head is clear of the os uteri.

And here I am at once met by the inquiry, Why not use the forceps in such cases? I believe the fillet to be equally efficacious and far simpler.

There is no doubt that the application of forceps will always, by the patient at least, be considered an anxious if not dangerous operation. Chloroform will often be required; assistance will, as a rule, be needed; a consultation will sometimes be thought advisable; and yet the practitioner will very often, and more especially in general practice, be

desirous of *at once* terminating a labour in a case where, from the prejudices of the friends, or the want of necessary help, forceps are inadmissible. We must all have seen instances of the unreasoning panic which the sight or bare mention of forceps will often cause. We must all, too, have experienced the extreme difficulty of applying them, without chloroform or adequate assistance, to a nervous patient.

Here the fillet meets the difficulty. It is light and portable, and may be carried easily in the breast-pocket as a companion in all cases of labour. It may be applied without chloroform or other aid, and (if such a plan be desirable) without the patient being aware that "*instruments*," the bugbear of parturient females, are being applied at all.

It occupies but a small space in the pelvis, and when once applied will remain in position, so that traction may be resumed at any moment when desirable.

With such an agent at our command, equally efficacious, and far less formidable, than the forceps, we should not hesitate which to apply. There are a large number of country practitioners who will bear testimony to the amount of time which they have saved by the use of the fillet, and who are fully convinced, in spite of our text-books, of its efficacy. The instrument only requires to be fairly tried in order that this number may be indefinitely increased.

I am sorry that I have not been able to get accurate statistics from any other practitioners as yet of labours completed by the fillet.

I have myself delivered with the instrument in twenty-five cases. Of these cases fifteen were in primiparæ, twenty-two were normal head presentations, one was an occipito-posterior, and one a face presentation. The last case was a foot presentation, in which the instrument was applied, chiefly as an experiment, to the after-coming head.

In every case the child was born alive, in no case was it injured in delivery. In one case only was a mother's perinæum slightly ruptured; there were no other bad results whatever.

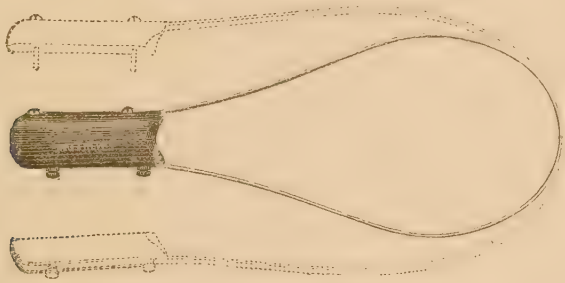
I must not allow this opportunity to pass without expressing my great obligations to Dr. W. A. Barr, and Mr. H. B. Spurgin, of Northampton, who were the first to teach me, by precept and practice, the use of this valuable instrument.

Let it be clearly understood that I have no wish to advocate the substitution of the fillet for the forceps in cases where any serious obstacle, requiring the exercise of much force, exists. It will soon be felt in any given case whether the aid of the loop be *sufficient or not* for the occasion. To the fillet in its old form, as usually seen, there are many serious drawbacks. It is difficult of introduction, and still more difficult of adjustment; if much force be applied, injury may be inflicted on the child; if it be desired to remove the instrument, when once in position, this will be found difficult or impossible of accomplishment. These difficulties have been partly met in Dr. Westmacott's improved whalebone fillet, figured in Barnes's 'Obstetric Operations.' In this instrument the great flexibility and comparative breadth of the loop aid the introduction and preclude injury to the child. The difficulty in removing it, when once applied, is simply obviated by causing one end of the whalebone loop to be attached to the handle by screws and nuts, which may be removed at pleasure, allowing the free end of the loop to be drawn *round* the presenting part, and so easily liberated.

But another most frequent difficulty, that of *adjusting* the instrument, remains unconquered. This difficulty is even increased by the great flexibility of the loop. Let us suppose a normal head presentation, with delay on the perinæum, from inertia of the uterus, or rigidity of the soft parts. Here the loop must be introduced posteriorly, and moved forwards, so as to include the head, till it becomes fixed under the chin of the child. In some cases this may be done with comparative ease; in others it may be quite impossible. If the head be unusually large, or in very close contact with the vaginal walls, we shall find great difficulty in bringing the two limbs of the loop, *attached as they are to a single handle,* into exact apposition. The whalebone will become bent and obliquely twisted, or impacted, in part, between the

head and the soft parts; or the whole instrument will assume an obstinately oblique position. Unless a complete apposition be attained, or if the obliquity continue, the instrument will inevitably slip when traction is applied.

The desideratum here clearly is that each limb of the loop may, after introduction, be manipulated separately till a firm hold is obtained. Any error of position, or twisting, or impaction of the loop, might thus be rectified at once by movement of the part at fault. This has been, I think, completely attained in a recent modification of Dr. Westmacott's instrument, made for me by Messrs. Matthews. In this instrument the handle is divided longitudinally, so as to leave one end of the whalebone loop attached to each section of the haft. The two portions are separable at pleasure, or united, when compressed, by steel pins, projecting from



one half of the handle and perforating the other. The principle of Dr. Westmacott's side-fastening, to aid removal after introduction, is retained. The handle is made slightly longer, for more convenient manipulation. The difficulty of adjustment is thus completely overcome. The instrument may be introduced as usual. Let one half of the handle then be taken in each hand, and, by a gentle sawing movement in the direction required, and by pressure on each limb alternately, the loop is readily brought into its due position and relation. I am sure that this slight alteration will greatly facilitate the application of the fillet, and may perhaps lead to its more extensive and well-deserved adoption as an obstetric instrument.

Dr. WESTMACOTT said: I am very glad to hear the subject of the whalebone loop or fillet again brought before the Society. Four years ago my friend, Dr. Murray, then one of the Secretaries, read a slight sketch I wrote on its use accompanied by diagrams (vide Vol. XI, 'Obstet. Trans.'), and at the same time I exhibited some specimens of other loops that had been and were in use, together with my own alterations, which consisted in substituting screws and nuts on one side of the handle so as to free one end of the whalebone, where the head of the child is so impacted as not to allow of the loop being removed without cutting the end, when it is necessary to have recourse to forceps, &c. The notion of a divided or double handle presented itself to me at that time, but, as I considered simplicity with usefulness all that was necessary, I abandoned the idea. I have since then added a strong india-rubber ring which slides up and down the loop, keeping it more convenient when in the pocket; also it is of advantage when the loop is placed on the head of the child to slide up and compress the bones so as to allow of easier extraction. One hand being all that is necessary with the finger hooked over the handle for traction, the other hand can guard the perinæum. With regard to the application of the instrument in various cases, I quite agree with the author of the present paper, but I object to the loop being applied to the chin, as I consider it apt to slip towards the neck, and might strangle the child. I usually apply it over the eyebrows, but even if it slips below the nose I have never seen any other bad result than a slight mark on the cheeks, which disappears in a few days. Another objection I have to the instrument at present exhibited is the thinness of the loop; the width is quite correct, but the edges are rather too sharp and might scratch the skin, besides twist or split the whalebone. Twice its present substance, I should say, would not be too much. I have used my own handle between sixty and seventy times during the last eighteen years (renewing the whalebone only once), and with favourable results, in almost every case. My friend, Dr. Protheroe Smith, kindly presented me with a loop he had used some twenty years prior to my bringing the subject forward, in which he had to cut away one of the ends to dislodge it, thereby showing at once the improvement I had made. Then with regard to the difficulty some practitioners have experienced in adjusting the loop, I consider very little perseverance is required in those cases where its application is possible, and I cannot see anything unphilosophical about its use as they further state. I may add that Dr. Barnes has done me the honour of representing my loop among the various instruments illustrating his work on midwifery. I quite agree in thanking the author for his very interesting paper.

Dr. AVELING thought obstetrical writers very properly omitted any lengthened description of the fillet. Compared with the forceps

it was an unscientific instrument. Its liability to slip had been observed long ago, and Leveret, to prevent it, added a third branch. This same instrument had not very long since been reinvented by Dr. Sheraton, and, he was sorry to say, patented. If the fillet were hooked over the chin as recommended by Dr. Wilmot there was chance of its slipping down round the neck or producing strangulation, and if it were hitched over the nose or brow as advised by Dr. Westmacott it injures the former or slips over the latter. The instrument might answer where slight traction was required, but he should be sorry to have to rely upon it where the maternal passages were narrow and much force was required.

Dr. Playfair said that no fact in the history of obstetrics was more curious than the way in which the fillet would crop up again and again as an obstetric instrument. It seldom happened that many consecutive years passed without some one writing a paper to show its advantages; and invariably it again shortly fell into what he could not help thinking was a very well-merited oblivion. The reason of this was obviously the appearance of simplicity about the operation, and the fact that it could be generally performed without the knowledge of the patient, the latter, in his opinion, being one strong reason why it should not be used. But the truth is, as Dr. Aveling had remarked, that the fillet is essentially an unscientific instrument. If it were applied just as the head was escaping, and after it had turned under the arch of the pubes, it might probably do no harm; but if it was used before this, when the head was higher in the pelvis, traction over the face would necessarily produce extension of the chin before the time for that change had arrived, and thus interfere with the natural mechanism of delivery. He was surprised that his friend Dr. Wilmot, who had shown his thorough knowledge of scientific obstetrics by gaining the scholarship in midwifery in the University of London, should not have recognised this objection to the instrument. But the strongest reason why the use of the fillet should be discouraged was that it directed attention away from the forceps, an instrument perfect in its adaptation to the natural mechanism of delivery, and the use of which it was desirable in every way to extend. The contention of those who recommended the fillet because it was easier to apply, less dangerous, and less alarming to the patient than the forceps, he would strongly oppose.

Dr. Eardley Wilmot observed that his object in introducing the subject of the fillet to the Society was twofold:—First, to endeavour to prove that the fillet is an instrument of real value, and that it is worthy of a far higher position in our estimation and in our text-books than it occupies at present; and, secondly, to bring forward his new modification of the instrument, which

he believed to be of far greater practical value than any previous form. In reply to Dr. Westmacott, Dr. Wilmot said that both he himself and many other practitioners had experienced great difficulty in applying Dr. Westmacott's instrument. On the other hand the instrument now before the Society had been employed with ease and success in twenty-five cases. As regards the question of injuring or strangling the child, the results of the operation were the best answer to this argument. He believed the practice of applying the loop beneath the chin of the child to be quite free from danger. In answer to Dr. Aveling, Dr. Wilmot could not agree with him that so successful an instrument ought to be considered "unscientific." The danger of slipping after application was absolutely nil. In reply to Dr. Playfair, Dr. Wilmot had never intended to place the fillet in competition with the forceps as a means of delivery in difficult labour. The instrument could be used either as a lever or as a tractor, and in either case if applied with due skill and consideration the mechanism of parturition need not be interfered with. He concluded by thanking the Society for the attention with which they had listened to the paper.

A CASE OF COMPLETE UTERUS BICORNIS, THE SEPTUM EXTENDING INTO THE ONE COMMON CERVIX: PREGNANCY OF THE RIGHT HORN: TURNING AND EXTRACTION ON ACCOUNT OF PELVIC CONTRACTION, THE CONJUGATE DIAMETER MEASURING ONLY TWO AND A HALF INCHES.

OBSERVED AND COMMUNICATED

By E. H. M. Sell, A.M., M.D.,

MASTER OF OBSTETRICS OF THE UNIVERSITY OF VIENNA; FELLOW OF THE ACADEMY OF MEDICINE OF NEW YORK, ETC.

Such a case as that about to be described is met with so very seldom that even Professor Carl Braun pronounced it the only complete case of uterus bicornis that he had seen in an extensive private and hospital practice of twenty years,

including from 7000 to 9000 cases annually which came under his observation in the wards of the General Hospital of Vienna.

The patient was Maria W—, servant, æt. 31, single, Roman Catholic, born at Jetrichowas, Bohemia, living during the last four years at Vienna. The patient said that she commenced to menstruate in her fourteenth year, that the menses recurred usually every three weeks, lasting from three to four days without any pain, that she never had any discharge, and that she never had any severe illness; physically, however, she had always been weak.

In 1870 she aborted in the sixth month of pregnancy, when she stated that she lost much blood, a midwife only being in attendance. She also stated that she had given birth to one child before, but her assertions were considered doubtful.

On the 31st of January, 1872, the patient was admitted into the General Hospital and a pregnancy of nine lunar months was diagnosed. In Douglas's space could be felt a movable tumour, which was firm, somewhat globular, and about the size of the fist.

On the 1st of February the patient was presented at Prof. C. Braun's clinic. The tumour was still situated in Douglas's space, somewhat towards the left; it felt elastic and as if containing fluid. It did not arise from the bone, as the examination per rectum proved. Its very globular form and the absence of similar masses in the neighbourhood excluded the supposition of its being a fæculent accumulation, while the diagnosis of fibroid or carcinoma was inadmissible from its want of hardness and from its regularity of surface. The uterus was found inclined to the right, the child was small; all the circumstances of the case indicated a nine months pregnancy. Labour set in on the morning of February the 3rd. Temperature in the axilla 38·4° C. The cervix being dilated, the finger could be passed into the tumour, and when withdrawn several pieces of decomposed membrane followed. From the very foul smell of these shreds of tissue it was supposed by the assistant that the tumour might be a carcinoma which

had eaten through the wall of the uterus. About five o'clock p.m. the patient began to be feverish and complained severely of the pains. Temperature 39·6° C.

Prof. Braun, having now taken charge of the case, mentioned that he had never seen a medullary carcinoma in Douglas's space in a pregnant woman; it might at most be a gelatinous cancer. Preparations were, however, made for operative interference should the nature of the tumour render such necessary.

The patient was chloroformed, and Prof. Braun proceeded to make a thorough examination, the os uteri being sufficiently dilated to admit three fingers. He gave the following as the result: The soft tumour could no longer be found in Douglas's space; it was pushed into the abdominal cavity; the projecting promontory of the sacrum could now be felt, and the amount of pelvic contraction accurately ascertained. The true conjugate diameter was only two and a half inches. Above and to the left of the cervix was a cavity into which the finger could penetrate. It was filled with a soft spongy structure. To the right could be felt the pregnant uterus. The membranes were ruptured, and the head presented at the upper strait. Prof. Braun pronounced the following as his diagnosis:—that the case was one of *uterus bicornis*, the soft tumour being the left horn; that the membranous shreds were portions of the decidua lining the unimpregnated horn. Owing to the narrowness of the pelvis, the delivery was an extremely difficult proceeding. The child was turned upon the right foot and extraction made, but the head could not be delivered.

An attempt was made to apply the forceps but without success, owing to the disproportion between the size of the head and that of the pelvic outlet. Another and more powerful effort to deliver by traction was made and this time with good result, although there seemed some danger of luxating the child's vertebræ. The child was a female, 19 inches long, and weighing 4 lbs. 14 oz. (Vienna). It was deeply asphyxiated, and respiration was only induced after unremitting efforts had been made for half an hour to

bring the lungs into action. Artificial respiration, friction, sprinkling with cold water, &c., were tried, and at length it breathed fully. It was found necessary to extract the placenta, as the uterus seemed powerless to do so. A slight laceration was found on the right side of the cervix, and an abrasion on the vulva which formed an ulcer, yielding easily to treatment. The uterus contracted firmly after the removal of the placenta, and it was now impossible to reach the left horn with the finger. It could, however, be felt through the upper part of the vaginal wall, as large as the pregnant uterus of two months. As the patient was feverish the child was sent to the Foundling Hospital on the fourth day.

The feverish condition continued until about the seventh day; the involution of the uterus, however, was perfect, and on the 16th of February the patient was discharged, having remained four days longer than the usual period on account of the ulcer of the vulva.

OCTOBER 1st, 1873.

Edward John Tilt, M.D., President, in the chair.

Present—19 Fellows and 3 visitors.

Books were presented by Dr. R. Battey, Mr. Fairlie Clarke, Dr. F. M. Robertson, Dr. P. H. Watson, Professor Scibelli, Professor K. Shroeder, Professor G. Fabri, Professor A. Pari, and Professor Lazarewitch.

The following gentlemen having signed the obligation papers were declared admitted as Fellows of the Society: Mr. F. Davison (Armagh), Dr. Simon Fitch (Portland, Maine), Dr. W. V. Jakins (Ballarat), and Mr. Edward H. Steele (Kingston).

John Goldsmith, M.D. (Worthing), was elected a fellow of the Society; and the following gentlemen were proposed for election: Dr. L. E. Desmond (Liverpool), Mr. W. J. H. Lush, Dr. J. A. Macdonald (Woburn), Mr. M. Monckton (Hurstpierpoint), Mr. A. Nicholson, and Mr. Joseph Smith (Jersey).

A CASE OF VESICO-VAGINAL AND RECTO-VAGINAL FISTULA.

Reported by T. Eyton Jones, Wrexham.

M. F—, æt. 26, single, a native of Wrexham; born of healthy parents, who are still alive; mother a midwife; was seized

with labour pains one Saturday night at 11 p.m. in June, 1868, and attended from this hour till 5 a.m. on Sunday by her mother, who then sent for the parish medical officer's assistant, who, thinking matters not sufficiently advanced, left her, calling at intervals up to a late hour on the Monday evening, when the mother states the child's head was to be seen lying on the perineum. Still the gentleman would not interfere, and she was not delivered until the parents called in another medical man, who speedily relieved her with forceps at 5 p.m. on the Tuesday afternoon. To exonerate the parish medical officer, I may state that he was ill in bed. In three days after the confinement another assistant of his, managing a branch practice, called to see her, and, as they state, pushed up her bowels, which had even protruded through the sloughed vagina.

She lay in bed eight weeks after the confinement before she could venture to sit, and in ten weeks after her confinement came under my care as an outdoor infirmary patient. She then was anæmic, complained of great pain in the vagina, and presented the following condition on examination:—Great redness and swelling of the labia; at the vaginal entrance were two apertures, the anterior small, barely admitting the little finger, apparently entering the bladder, the posterior opening covered by a red velvety-looking mucous swelling, through which the forefinger entered with ease and apparently consisting of the vagina and rectum, dilated into one cavity, and containing in it the closed mouth of the uterus. Of course with this state of things she can neither retain her fæces nor urine, and the catamenia have never since reappeared. Eighteen months after her confinement I sent her up to St. Bartholomew's Hospital, and placed her under the care of Sir James Paget, who three weeks afterwards sent her back, stating that he did not think then he could do her any good. Two years and a half after labour, or at the beginning of 1871, she suffered excruciating pain for a fortnight, at the end of which she parted with a phosphatic calculus one inch in circumference and two inches in length, evidently formed in some pouch in the bladder. The treatment has mainly con-

sisted of large doses of opium, antiseptic injections, passing large bougies to dilate the openings (with a view to future treatment) and venesection every two months to relieve the severe headache, evidently caused by catamenial suppression.

Dr. Heywood Smith thought that the paper to be of any use to the Society should state accurately the exact present state of the parts, and also the opinion of Sir James Paget as to the patient's condition with regard to any future operation. It did not appear, from the case as then read, that the case was hopeless as regards any operative interference, and it seemed to him that an attempt should be made to remedy a state of things so deplorable.

NOTE ON THE MUSCULAR SUSSURRUS IN RELATION TO THE FŒTAL HEART SOUNDS

By J. Braxton Hicks, M.D., F.R.S.

There is a point with regard to the diagnosis of pregnancy, and the life of the fœtus by means of the existence of the fœtal heart sounds, which I have not infrequently observed in the course of my practice, but which I do not remember to have seen in print. It has more specially occurred to me in searching for evidence of fœtal life during labour.

I allude to the imitation of the fœtal heart-sounds by the sussurrus of the abdominal muscles. I have observed it most markedly in cases of labour where after long efforts to expel the fœtus the woman has lost heart, or power, and only slightly brings her muscles to play; or when, in listening for the heart sounds, I have requested her to suspend her efforts at expulsion.

The vibrations are often remarkably similar to the sounds of the fœtal heart, and in some instances can be counted as distinctly; the number of them falling so low as to correspond to the rapidity of the fœtal beats. In one case I found it about 180 per minute, or 3 per second and it was so like the

heart-sounds of a living child that I concluded the fœtus was alive, although when it was born shortly after there was strong evidence that it must have been dead two or three days previously.

That this sound is owing to the sussurrus of the muscles, and not to other agencies, is sufficiently clear by its complete subsidence upon entire passiveness being obtained.

The rapidity of the contraction of the muscles which produces the sussurrus is capable of being estimated, as was first pointed out by Wollaston, and since that almost simultaneously by Professor Haughton ('Animal Mechanics,' p. 17), and Dr. Colongues of Paris, by means of a tuning-fork. But though in a healthy muscle the vibrations have been about 35 per second, or 2100 per minute, yet in trying a paralysed muscle it reached as low as 6 per second, or 360. This number much exceeds the rapidity of the fœtal heart-sounds, but it was found that in an overtired muscle the number was much lowered. I find no account of experiments in muscles under the imperfect exercise of the will like the state of the abdominal muscles in a condition of half suspension coupled with over fatigue.

I wish to add this slight contribution to our knowledge of the subject to point out—

1st. That the number of vibrations of the abdominal muscles in a state of half suspension can be distinctly counted, watch in hand.

2nd. That their number and their sound is so like those of a very rapid fœtal heart that they may be mistaken for them.

ON THE SPONTANEOUS SEPARATION OF THE PLACENTA WHEN IT IS PRÆVIA.

By J. Matthews Duncan, M.D.

Cases of placenta prævia are, as is well known, divided into classes,—central, lateral, and marginal. As these designations are extremely ill-defined, and as, besides, different authors use the terms with different meanings, I shall avoid using them altogether as terms of classification, but resort to them as words bearing meanings generally understood.

I shall not, in this paper, discuss that part of the separation of a placenta prævia which, if the whole organ has not previously been detached from the uterus, is delayed till the usual time of separation, that is, when the birth of the child is being completed or is completed; nor shall I discuss those separations, from accidental causes, to which the placenta is probably more liable when prævia than when it occupies its natural site. My remarks will be confined to that total or partial separation which takes place before the child can be born, and which may be described as almost a necessary result of the mechanism of delivery in such cases.

I shall refer in the course of the paper, only to the more important positive errors which are to be found in well-known and esteemed authors; but it is desirable also to point out that the whole ordinary mode of describing the anatomy and physiology of this subject requires to be corrected to bring it into agreement with anatomical and physiological facts.

The importance of the subject lies not merely in the settlement of points of scientific interest, but in their settlement being the only basis of a rational practice and peradventure the guide to the establishment of such practice.

The lower part of the cavity of the uterus, as it is distended in advanced pregnancy, is part of a spheroid or a hemispheroid with which the cervix is in connexion, and of whose

surface the internal os of the cervix occupies the vertex. To form the genital passage for the child, this hemispheroidal shape is destroyed by the expansion of the above-named internal os of the cervix and of the adjoining parts. That which formed during pregnancy a portion of a spheroid forms during the passage of the child a small part of a nearly cylindrical tube.

This expansion is effected by uterine contractions. The circular fibres of the lower part of the body of the uterus are either in a state of relaxation while the longitudinal are in action, or their action is overpowered by that of the longitudinal. While expansion of this lower portion of the body of the uterus in every direction transverse to its axis is going on, there is simultaneous shrinking in a meridional direction.

During labour every portion of surface of the body of the uterus undergoes contraction, and I know no fact or argument which indicates that one part becomes more contracted than another, with the single exception implied by the transverse expansion of the lower part of the body in order to contribute to form the nearly cylindrical developed genital passage. Above this part contraction goes on in every direction. In this part the contraction or retraction can be only in the meridional or longitudinal direction.

This contraction is the cause of the tendency of the body of the uterus during labour towards a spherical shape with a large inferior opening into the cavity of the cervix. The contraction is possible, for the body of the uterus embraces the ovum tightly during pains, and part of the ovum is pressed into the newly forming large cavity of the cervix, or through it into the vagina.

There is nothing known as to the arrangement or strength of the muscular fibres of the body of the uterus which would induce any doubt as to the meridional contraction being the same in all its parts. This meridional contraction similarly affects the placental site or insertion wherever it may be. The placenta is so constructed and so connected with the uterus that this contraction does not separate it in early

labour, that part of the process with which alone the subject of this paper is concerned. The separation, indeed, does not take place till the child is partly born, that is, until a very much greater degree of contraction has been produced than can ever exist during the separation of the placenta when prævia. Although the lower part of the body of the uterus is, in early labour, expanded greatly, that condition does not imply greatness of contraction or retraction; this latter may be very slight while rapid expansion is going on. Now clinical observation assures us that a small proportional part of the whole amount of expansion that must take place separates the part of placenta nearest the internal os, and it cannot be supposed that at this time contraction has any influence on the separation, for the contraction must be to a very slight degree. If this amount of contraction or retraction detached the placenta, or any amount of contraction that takes place in early labour, then this organ would be detached in early labour in every case of childbirth. I therefore conclude that the placenta when prævia is not detached by uterine contractions.

There is no doubt that uterine contractions do, in all normal cases, effect the detachment of the placenta when the child is nearly or completely born, the uterus being then nearly empty and the shrinking of the placental insertion very great; and it is extremely natural to attribute to the same cause its detachment in early labour in the abnormal state of placenta prævia; but I think I have shown that, at least in the present state of our knowledge, it is not rational to attribute it to this cause: yet that it is generally attributed to this cause is well known, and I shall cite a very recent author on this subject to show the prevalence of the error. In the work referred to* is the following passage, "The mouth of the womb must open to give passage to the child. This opening, which implies retraction or shortening of the cervical zone, is incompatible with the preservation of the adhesion of the placenta within its scope. In every other part of the womb there is an easy relation between the contractile limits

* 'Barnes's Lectures on Obstetric Operations, &c.,' 2nd edit., p. 408.

of the muscular structure and that of the cohering placenta. Within the cervical region this relation is lost. The diminution in surface of the uterine tissue is in excess."

The contraction or retraction of the uterine wall, to which the placenta is attached when prævia, taking place as it does in the direction of the longitudinal axis of the womb, while it does not detach the placenta, produces an amount of detrusion of the whole of the organ when separated or of the separated portion. The detruded portion is somewhat hardened by thrombosis of the placental cells, and its lying in the cervical cavity has been a fruitful source of error. It may be remarked that if, as labour advances, it hangs with its lower edge far down in this cavity, it has probably been originally attached so as to cover the internal os, and its lower margin has been originally attached to the side of the uterus opposite to that to which it is now adjacent. There can be no doubt this detruded portion has been generally regarded as attached to the cervix, often even as far down as the margin of the os uteri externum. One cannot read authors without seeing that the error, though often stated, is still oftener implied; and P. Müller* deserves the credit of ingenuousness for pointing out his own fall into it. Moreover, deceitful adhesion by clotted blood, between the cervix and placenta, and imaginary detachment by breaking it up, are, no doubt, common occurrences. When authors have supposed that they have worked out the pathology of placenta prævia and its rational treatment, they have been proceeding too hastily, for they have only been groping in the dark, ignorant of the behaviour of the cervix during labour and of many other points necessary to be known and considered before reaching the desired results.

The paramount errors which run through writings on this subject are, that the cervix uteri is or may be the seat of placental attachment, and that in early labour the surface of the cervical portion of the uterus is diminished in extent.

* "Untersuchungen über die Verkürzung der Vaginal Portion in der letzten Monaten der Gravidität," s. 126. For some remarks in connection with this topic see my 'Researches in Obstetrics,' p. 261.

The truth is that the placenta is never attached to the cervix, and that the behaviour of the cervix in labour and the amount of opening of the os uteri externum have only indirect and remote relations with the pathology of placenta prævia.* A placenta prævia is attached to the body of the uterus above the cervix and may cover its internal os. The surface of the cervix uteri, instead of being diminished during labour, is greatly increased in every direction.†

It is important for students to know that well-known authors have written under the influence of such fundamental errors; and the circumstance is the more remarkable because antecedent authors, whose works they have carefully studied, have distinctly disavowed the erroneous views. In the following passage from the works of Simpson,‡ for example, we have the chief error referred to, as well as others, "There are, according to most anatomists, few or no contracting fibres in the structure of the os and cervix uteri, and certainly after delivery I have generally, if not always, found it remaining open, gaping, soft and flaccid, even when the proper cavity of the uterus above felt shut and contracted, and its parietes hard and firm. Still, when the placenta is attached to the surface of this uncontracting portion of the uterus, hæmorrhage is not common after its separation, unless some laceration of its vessels has occurred."

In like manner Barnes, although showing in some passages a degree of appreciation of accurate views, gives a figure at page 410 of the second edition of his lectures on obstetric operations, which is reconcilable only with the erroneous views; and at page 421, imitating Simpson, he has the following passage embodying great errors: "In every labour" (says he) "the cervix, having to suffer great distension and contusion under the passage of the child, and possessing less

* For an example of this error of attaching too much importance to the condition of the external os, see Barnes's 'Lectures on Obstetric Operations,' 2nd edit., p. 412.

† See 'Edin. Med. Journal,' June, 1873, p. 1066.

‡ See 'Selected Obstetrical and Gynæcological Works,' edited by J. Watt Black, M.D., p. 237.

contractile elements in its structure than the rest of the uterus, is liable to paralysis for a time. This state is more likely to occur in labour with placenta prævia, and it is doubly dangerous because the cervix is the placental site."

It is at present impossible to give an exact statement of the changes which take place during labour in the lower hemispheroid of the uterine body, especially as to whether its area is diminished or increased; but of some points there is no doubt. Like the cervix, this lower hemispheroidal portion has its extent greatly increased in all directions transverse to its axis. Unlike the cervix, it has its meridional extent diminished, that is, in a direction nearly parallel to its axis. I know at present no means of deciding whether the expansion in one direction does or does not make up for shrinking in the other.

The placenta may be spontaneously detached from the uterus in various ways, as by utero-placental hæmorrhage pushing it off, or by traction of the cord pulling it off; but the ordinary mechanism of its separation is contraction of the seat of its attachment with which a detrusive force may be combined. In cases of placenta prævia, none of these mechanisms is in efficient action, but that which operates is expansion of the seat of its attachment. The separation by contraction of the placental insertion and that by expansion of it have this in common, namely, that both consist in the production of an incompatibility between the area of attachment and the organ attached. Contraction of the placental seat, producing compression of the cotyledons and substance of the placenta, may take place to a considerable extent, without producing detachment, as in the first stage of ordinary labour; and, as already said, there is no ground for believing that this contraction is, in the first stage, in cases of placenta prævia, greater than in the first stage of ordinary labours, or goes so far as to be incompatible with the maintenance of the placental connexions. Expansion of the placental insertion in the first stage of labour is the distinguishing specialty of placenta prævia and has detachment as its distinguishingly peculiar result. This kind of expansion

is only rarely a cause of detachment under any other circumstances. Hydramnios may produce placenta membranacea and is liable to produce detachment by uterine expansion. In placenta prævia expansion of the lower part of the body of the uterus, in early labour, regularly produces, first, stretching of cotyledons and expansion of placental surface, and then separation. While detaching expansion of the uterine site of a previous placenta or of a previous portion of a placenta is going on in directions transverse to the axis of the uterus, contraction is going on in a direction parallel to the uterine axis, and this contraction pushes the detached placenta or detached portion into the developing or expanding and elongating cervix, and in the early part of the first stage brings it within easier reach of the examining finger; while, at the same time, the seat of former placental attachment is getting more and more distant from the external uterine orifice and the examining finger.

This problem of the separation of the placenta when prævia is made easier of comprehension by directing attention to a case of what is called marginal attachment, or when the placenta encroaches on only one side of the lower uterine hemispheroid, and does not cover its vertex, that is, the internal os uteri. The mechanism of separation is no doubt the same when the placenta is inserted centrally, that is, when its centre is at or near the vertex of the hemispheroid, but then one is confused by the reflection that, if the os uteri internum opens, it cannot do so without separating from the placenta unless it is disrupted. This disruption sometimes does actually occur, and it may be the mechanism of some cases of birth through a hole in the placenta, the organ being torn through from below upwards, and a way thus made for the fœtus; not perforated by the head being forced through it from above. But this is a digression from the main subject. The placenta is, in fact, seldom disrupted and the opening of the cervix is then incompatible with continued cohesion of the placenta and uterus, because of the great amount of the expansion, as has been described.

The detachment will progress as the pains and the first

stage of labour proceed; and as the detachment of the spontaneously separable portion may not be completed till the internal os is dilated to a diameter of about four inches, the process of gradual detachment may not only occupy a long time, but may also occupy a great proportional part of the whole duration of labour. Indeed it may safely be asserted that in labours which go on with ordinary activity, and uninterfered with, in multiparæ, the gradual process of detachment will occupy by far the greater part of the time of the labour. The detachment will be completed when the first stage of labour is completed, that is, when the external os uteri is completely dilated. But the detachment may be completed and probably will be completed much earlier than this, namely, when the internal os uteri is completely dilated, or even somewhat earlier, for it is probable that the limit of necessary expansion of the part is reached without separation going on during the last part of the stretching.

The extent or amount of placenta detached when prævia will depend on the degree of approximation to centrality of attachment over the internal os, and can therefore be settled only by direct observation in each individual case.

A more important law of detachment may be discovered by directing attention to the shape of the lower hemispheroidal portion of the pregnant and non-parturient uterus, in order to find the extent, measuring along a meridian from the vertex, over which the expansion is such as to produce detachment.

Here we must make a digression as to the extension of a surface according to the direction of the traction or resultant of expanding forces to which it is exposed. Take as the simplest and quite sufficient instance a spherical surface exposed to a uniform traction in all directions perpendicular to one diameter; it will be converted into an oblate spheroid, but different portions of the surface are increased in very different proportions; the areas towards the ends of the diameter being increased in the greatest ratio, while the equatorial areas are increased in the smallest. In other words, those portions of the surface which are most nearly

perpendicular to the diameter or axis, that is, those which are most nearly parallel to the plain of retraction, are relatively most extended.

Thus we see that those parts of the lower hemispheroidal uterine portion, which, before dilatation of the internal os uteri begins, are nearest the internal os or vertex, are necessarily the most extended, while those parts which are more remote and whose surface is more nearly parallel to the uterine axis undergo comparatively little extension. At the remote parts this extension may be, and no doubt is, so slight as not to disturb adhesion, seeing that the placenta has some extensibility of its own. It thus happens that the area of spontaneous detachment is not coextensive with the whole area of expansion. It is thus also easily explained why detachment begins at the internal os, for there expansion is at all times greatest.

With these principles in view I have examined the shape of the lower uterine hemispheroid in actual or authentically depicted uteri, and I find that a meridian leaves the vertex or centre of the internal os in a direction nearly at right angles to the uterine axis, and that, after it has described an arc of one and a half to two inches in length, it becomes nearly parallel to it. At about two and a half inches from the vertex the diameter of the uterine cavity is four inches, and, this is about one and a half inch above the vertex, measuring along the uterine axis. A canal of about four inches in diameter is large enough to transmit the fœtus. There is therefore no need for expansion to any considerable amount above that circle of latitude which is distant two and a half inches measured along a meridian from the centre of the internal os. The measurement will of course be less than two and a half inches if taken from the edge of the internal os instead of its centre. It is thus seen that the area of the lower uterine hemispheroid over which dilatation of the internal os necessarily involves great expansion of uterine surface nearly corresponds with the extent of area which must be expanded in order to transmit the fœtus. Expansion beyond a diameter of four inches would

insure very slight extension of uterine surface and a consequent slight detaching power, so slight indeed as to be probably more than counterbalanced by placental expansibility.

I therefore conclude that the detaching area of the lower uterine hemispheroid, covering a portion whose vertex is the centre of the internal os uteri, has a meridional semi-length of about two and a half inches and that its chord measures about four inches.

This measurement of the extent of the spontaneously detaching area is, I believe, quite consistent with all the facts of the matter hitherto ascertained. Measurements founded on the extent of the thrombosed portion of placenta in cases of unavoidable hæmorrhage require to be much more carefully considered than they have been. I have often seen thrombosed segments of from three to four inches across, measuring along a line extending from the edge to the centre of the placenta. Before such thrombosed segments of placenta can be taken as tests in this matter, the following points must be settled :—Is the thrombosis limited exactly to the detached portion? Was the case examined before dilatation of the internal os, and the placenta ascertained then to be attached marginally to the internal os? The mere statement that an edge of the placenta was felt in the os or cervix in early labour is quite insufficient, especially when made by authors ignorant of the behaviour of the cervix in labour, and holding erroneous views as to the insertion of the placenta when previa, for such edge may belong to a portion of placenta which had originally been attached so as to cover the os uteri internum, and now presents its edge in the cervix, having become detached, retaining, however, its connexion with the still adhering major part of the placenta. The extent of such thrombosed parts, being three or four inches across, is quite compatible with the views which I am enunciating when thus explained.

Cazeaux* speaks of the whole lower third of the uterine cavity as the seat of spontaneous detachment, but he gives no

* 'Traité Theorique et pratique de l'art des Accouchements,' &c., ed. iv, p. 700.

reason for this except the imaginary one, that the lower third increases more than, and disproportionately with, the placenta inserted on it. I reject his view, which is derived from Jacquemier, as having no good evidence in its favour either from theory or from facts.

Barnes estimates the extent of what he calls the "cervical zone," or that part of the inner serface of the womb bounded above by what he calls the "lower polar circle," and which forms his "region of dangerous placental attachment," as measuring from three to four inches from the os uteri. But this is far too indefinite, for he does not state whether or not he measures along a meridian or its chord; nor does he state whether or not he measures from the external or internal os, and this latter circumstance introduces a possible variation or error of an inch during pregnancy and three or four inches during labour. If he measures from the internal os, as he may be supposed to do, then his three or four inches along the placental insertion would conduct far beyond where any dilatation takes place or where any mechanism of detachment could be established. Besides, he makes no allowance for the diminished amount of extension of uterine wall produced by the same amount of dilatation, according as the distance from the os uteri is increased.

Measurements, founded on the distance of the laceration of the membranes from the edge of the placenta, to which Barnes confides, following Von Ritgen and Carmichael, I regard as delusive; for, although the membranes burst at the os uteri, the rent may, within the limit of this part, be an inch nearer or more remote from the margin of the placenta, and spontaneous extension of the rent may cause additional confusion and error.

The determination of this measurement or of the limit of the area of spontaneous detachment is a matter of much interest, for it is the criterion for distinguishing between what is and what is not placenta prævia. Hæmorrhage produced by detachment of placenta or of a portion of it inserted above this limit are accidental; those produced by detachment, not accidentally caused, below this limit are unavoidable. Speak-

ing of the placenta as a mere mechanical obstacle to the birth of the child, we cannot call it prævia unless it is inserted centrally or nearly so, overlapping the internal os. But the placenta is not regarded in this light, for its importance as a cause of hæmorrhage is paramount; and it is, in this point of view, prævia when any part of it is attached within the detaching area, whose limits we have been discussing; or rather, that part of it is prævia which is attached within these limits.

The separation of the placenta, which alone I have hitherto been discussing, is that separation which is both spontaneous and a necessary result of the mechanism—that which ordinarily occurs in cases of this nature. But I see no reason to doubt that those uncommon accidents, which produce detachment in cases of what is called accidental hæmorrhage, that is, when the placenta is not prævia, may have a like effect when the placenta is prævia, and to these I shall not make further reference. But there is one occurrence which demands special consideration, that is, the total separation before the birth of the child. Now, although the placenta when prævia, being occasionally very thick, has sometimes a small diameter, it cannot be so small and so exactly placed centrally over the internal os as to have its whole surface within the detaching area of the lower uterine hemispheroid. How, then, is the total separation to be accounted for? It appears to me that its explanation is suggested by the observation of cases where the head perforates* the placenta before birth, and of cases wherein a caul is produced. In the latter accident the membranes are not lacerated at or near the centre of the os uteri but higher up, and a caplike portion sometimes enclosing liquor amnii between it and the head is pushed out along with it. As a caul is sometimes expelled long before the child, so may the completely separated placenta. In the former accident, where the head is forced through the placenta, we have a more or less central attach-

* It would be interesting to know if, in cases of perforation of the placenta, there was thinning of placental structure or absence of it in the part perforated.

ment of the organ, and the advancing head finds it easier to perforate it than to detach its margin, which lying beyond the spontaneously detaching area proper, remains adherent after the central parts are separated. So in some cases of more or less central attachment, it may happen that the liquor amnii or the head, propelled against the organ, may find it easier to detach the adherent margin and to push down the whole separated organ than to perforate it. The complete separation of the placenta is thus an accident beyond the common course of cases of centrally attached placenta prævia, and having a peculiar mechanism superadded to that of ordinary cases. This mechanism is detrusive force applied to the upper surface of the placenta, such as, when applied to membranes, produces a caul, and such as sometimes results in perforation of the placenta when it is prævia.

Separation of the placenta is universally held to be the explanation of those hæmorrhages in cases of placenta prævia which frequently occur in the latter months of pregnancy, and much ingenuity has been expended in the production of theories to account for them. I do not believe that in these hæmorrhages any separation necessarily takes place. To this subject I have made a slight contribution at page 261 of my 'Researches in Obstetrics,' and I shall not here enter further upon it, because doing so would lead me into the subject of hæmorrhage which I exclude from consideration at present.

Before concluding, I call attention to the interesting observations of Haussmann* on the separation of the mucous membrane of the womb in a variety of circumstances. These indicate that this takes place first at the junction of the cervix and body, that is, where a similar phenomenon occurs in placenta prævia; and it appears to me probable that an analogy in several respects may exist between the two sets of phenomena, though they are at first sight widely different.

* 'Beitrage z. Gynäk. u. Geburtsh.,' Berlin, 1873. See also a case of Helié's, reported by Joulin, 'Traité complet d'Accouchements,' p. 966.

Dr. Barnes expressly denied that he was open to the charge of committing the error imputed to him by Dr. Duncan, of stating that the placenta was ever attached to the os uteri externum. He (Dr. Barnes) had taken special pains to insist that the cervical canal had nothing to do with gestation. He had even sent to Dr. Duncan, years ago, a tracing of a drawing made by himself from a pregnant uterus, showing the separate cavity of the cervix. With regard to the remaining statements of Dr. Duncan, they would be found to be simply repetitions in other words of Dr. Barnes's published account.

ON THE DIAGNOSIS OF SUBACUTE OVARITIS.

By Edward John Tilt, M.D.

At the last meeting of the British Medical Association, a distinguished Dublin gynæcologist thought he could not better open the obstetrical section, than by expressing his surprise that the most recent writers on diseases of women should have wasted so much time on mechanical explanations of dysmenorrhœa, and should have undervalued the well-established agency of subacute ovaritis to induce this complaint. I can quite understand that the chance of cutting short a tedious disease by an incision, or by ingenious instruments, should have led some physicians to overvalue these modes of treatment, and to undervalue those of a less ambitious nature; for the belief in subacute ovaritis implies that the patient can only be cured by the old-fashioned humdrum way of acting on the whole system, as well as on the offending organ. The principal reasons of this neglect are, however, to be found in the difficulties that beset the diagnosis of subacute ovaritis, for all those who seriously undertake to establish it, and the lamentable facility with which it is often assumed to exist, so soon as any kind of pain is found in the ovarian region, whereas pain in the left ovarian region is a common symptom of cervicitis.

The difficulty of correctly diagnosing ovaritis is generally admitted; it so impressed Scanzoni that he despaired of doing so, unless the ovary were enlarged by layers of false membranes. This difficulty has led Gaillard Thomas to conclude it impossible to distinguish ovaritis from pelvi-peritonitis, an opinion which seems to be held by Dr. Matthews Duncan, if I rightly understand his work on parametritis and perimetritis.

The deep situation of the ovaries, their mobility, the fact that Douglas's space, their place of election when enlarged, may be occupied by the fundus of a retroflected womb, by various enlargements of the oviduct, by peritoneal conglomerates of old standing, sufficiently explains the difficulty, but the difficulty is principally due to the very important part that peritonitis plays in the pathology of the female pelvis. It is no doubt true that a limited amount of peritonitis sometimes helps the diagnosis by fixing down the ovary, so that the physician's finger may study it, but in the majority of cases, peritonitis obscures the diagnosis by embedding the pelvic organs in a mass that forms a pathological puzzle, only to be deciphered by a shrewd interpretation of the early history of the case. In the same way we can sometimes make a plausible guess that it is a diseased and ruptured ovary that has poured out the blood we have only just learnt to identify as hæmatocele.

The difficulty of recognising an abscess of the ovary is nowhere so well exemplified as in a case related in the Thesis of Dr. Siredey, an accomplished hand at pelvic explorations, who had very carefully examined his patient both before and after death without having been able to find any ovarian disease; nevertheless, on opening the body, the ovary was found converted into a bag of pus about the size of a small orange. It was the freedom from adhesion that caused this ovarian abscess to fly away from the finger that was intelligently seeking for a diseased ovary, and as this circumstance is of very rare occurrence, whenever the ovary is so acutely inflamed, a mistake, which is exceptional with ovarian abscess, is still less likely to occur with the hard, semi-

elastic, and sensitive mass of a subacutely inflamed ovary. Very slight accentuation of the symptoms of chronic ovarian inflammation, also renders its diagnosis difficult when it is obscured by old-standing uterine disease. Scarification of the os uteri, or caustics applied to the cervix, or even the judicious use of the uterine sound has sometimes rekindled in the ovaries and in the oviducts inflammation that had lain dormant for years, and caused death by acute peritonitis, and there are several cases of this description in Aran's work.

You see, gentlemen, I admit the difficulties of the subject, and I now propose to successively examine these difficulties, just as they occur to us in practice, and I shall be thus led to divide the symptoms of subacute ovaritis into catamenial symptoms, by which I mean the various morbid intensifications of the several healthy phenomena of menstruation, and into objective symptoms, like that enlargement of the ovary that we can often distinctly make out.

Now that we are well acquainted with the functions of the ovaries, we cannot meet with marked menstrual disease without admitting that the ovaries are at fault, but we are often uncertain whether they be actually in a state of subacute inflammation, or only functionally deranged by uterine disease or constitutional causes. In hopes of diminishing this uncertainty, I shall inquire—

1stly. What kind of women are most liable to subacute ovaritis.

2ndly. What they say of themselves to lead to the belief that they are suffering from subacute ovaritis.

3rdly. What are the signs and the chain of reasoning that lead us to conclude that women are suffering from this disease.

1stly. Although subacute ovaritis may be met with during the whole period of ovarian activity, it is most likely to be met with in young unmarried women, from fifteen to thirty years of age, particularly when delicate in body, sensitive in mind, and with proclivities to tubercular disease. When met with in women presenting none of these peculiarities,

the patients have all their lives suffered from menstrual irregularities, and the system has been irregularly or too strongly acted on by the sexual organs, so as to cause an unusual amount of breast pain, or inordinate sexual desire, or hysterical phenomena.

2ndly. Women who only suffer from subacute ovaritis get about as usual, but complain of habitual pelvic and mammary pain, and of a marked aggravation of the nervous symptoms of menstruation; the menstrual flow being too abundant or scanty. To form a correct estimate of ovarian pain, we should realise the various pelvic pains that women have to endure, and dismiss the persistent severe pain of acute metritis, the fierce paroxysmal pain of acute endometritis, and the dull, heavy, surpubic, bearing-down pain of chronic metritis. The pain of subacute ovaritis is a deep-seated pain in the ovarian region; it is a persistent, moderate, and bearable pain, extending down to the knee, as menstrual pain often does, sometimes accompanied by numbness, coldness, and anæsthesia of the anterior part of the thigh, as correctly stated by Négrier. This pain gives a certain degree of hesitation to the patient's walk, for she has learnt that a false step will very much increase it; going upstairs and coition will often do the same. The patient does not even sit down frankly, but will sit sideways on the chair, with the body bent forward; and she prefers to walk, if it be necessary for her to go out, and shrinks from driving, because she has found it increases the pain. Firm pressure on the ovarian region very much increases the pain, and the nausea that often attends it. Without being complicated by subacute ovaritis, cervicitis is often accompanied by pain in the left ovarian region, as well as by back pain; but this left ovarian pain is brought on by slight pressure, and not much aggravated by firm pressure. It is not a nauseating pain, neither does it extend to the thigh, and the patient is always the worse for walking, and bears carriage exercise very well. Dr. Gallard has confirmed my statement that, even when subacute ovaritis is attended by considerable back pain, the patient's sufferings are much aggravated by carriage exer-

cise; but further experience will show whether I am right in attaching considerable importance to this sign.

So much for the pain of subacute ovaritis, as observed independently of the menstrual periods, and it will then vary according to the degree of acuteness of the case. If the patient be seldom free from pain during the inter-menstrual period, the pain becomes greatly aggravated, so much so that it has been described as *pelvi-peritonite à redoublements.* Sometimes the pain subsides soon after menstruation, to reappear a few days before the next period, as a continuous dull ache, that is not relieved by the free flow of the menses, and the pain often then becomes a burning sensation in one of the ovarian regions, which is commonly admitted to mean, that ovulation has surrounded itself by a limited circle of inflammation.

When this menstrual pain is accompanied by a considerable amount of breast pain, nausea, and nervous symptoms, the patient is said to suffer from ovarian dysmenorrhœa; and, as Dr. Kidd has again recently pointed out, this may be to a great extent distinguished from mechanical and spasmodical dysmenorrhœa, by the fact that pain only begins, in such cases, when the womb is called upon to expel accumulated blood, the pain being sharp, tenesmic, paroxysmal, like all expulsive pains, instead of being the continuous aching or burning sensation of subacute ovaritis.

When, in addition to the ovarian pain I have so fully described, menstruation is preceded and accompanied by a marked aggravation of the usual mammary symptoms of that period, the breasts being swollen, painful, and hot, subacute ovaritis is *probable,* and likewise when marked mammary symptoms occur independently of menstruation, but in connection with habitual ovarian pain. The presence of evident hysterical phenomena, in addition to the above symptoms, should remind the practitioner, that occasionally convulsive hysteria is as much a symptom of subacute ovaritis, as stitch in the side is of pleurisy.

Most authors agree with me that, in connection with these symptoms indicative of subacute ovaritis, the menstrual

flow is more often abundant than scanty, though this has more frequently occurred in Dr. Kidd's practice.

Such are the catamenial symptoms of subacute ovaritis; singly, they mean little; united they mean so much, that it is only by their light that we can be able to correctly understand the various pathological results that we detect in searching for the enlarged ovary, by accurate modes of examination. The long continuance of these symptoms justifies the examination of the patient, even should she be unmarried.

Abdominal examination.—I have occasionally felt a moderately enlarged ovary, by this mode of examination, when the pelvis was shallow, the patient thin, and when the abdominal walls were free from spasmodic resistance to the pressure of the hand; but, as a rule, the ovary cannot be thus recognised, either by directing the united points of the fingers steadily towards the supposed seat of the ovary, or by the steady pressure of the united fingers, held parallel to the abdominal walls, so as to force away the intestines and circumscribe the ovaries. A suspicious fulness is often to be detected in the ovarian region, but this may be owing to previous pelvi-peritonitis. An abdominal examination is, however, invaluable to obtain a fair idea of the size and state of health of the various organs that surround the ovary.

Vaginal examination.—To better understand the case we make a vaginal examination, and then we often find that there is a considerable amount of cervical inflammation, as a complication of subacute ovaritis, or an error of diagnosis may have been made, the latter having been mistaken for the former disease; at all events, to cure cervicitis is the first thing to be done, for this will eminently conduce to set right what else may be wrong in the sexual organs. If, on the contrary, nothing is found amiss with the cervix, the fact increases the presumption that the catamenial symptoms are caused by subacute ovaritis, and the presumption is strengthened if, while the left hand forcibly depresses the ovarian region, the two first fingers of the right hand placed

in the vagina find a marked fulness and sensitiveness on either side of the body of the womb. If we then forcibly incline the neck of the womb to the side on which the ovary is supposed to be inflamed, this procedure so stretches the connections of the body of the womb with the ovary, that the pain is greatly increased, but the same would occur with recent pelvi-peritonitis.

It will be asked "Why does not the finger at once settle the question?" It can only do so when the pelvis is shallow and the womb low down, whereas the womb is often high placed in a deep pelvis. Under favorable circumstances the finger can feel alongside of the womb, or behind it, a round or ovoid body, separated from the uterus by a more or less deep sulcus; and if this body be rather movable, semi-elastic, and from two to three inches in diameter, we may feel certain we have to do with an inflamed ovary, when a sickening, debilitating pain is caused by pressing it. Remember, however, that this characteristic pain is not always present when the ovary is evidently inflamed, the best observers having found, that what they thought was an enlarged ovary was a rounded mass of old false membranes, or an abscess of the oviduct, which admirably simulates the ovary, by its shape, size, density and situation. Unfortunately for the accuracy of our diagnosis, inflammation of the oviducts is frequent, so is pelvi-peritonitis; therefore, in estimating the nature of the solid body which may be found attached to the womb, bear in mind the previous history of the case, and if you find that the catamenial symptoms of subacute ovaritis play an important part, you will not be far wrong in concluding that you have to do with an inflamed ovary.

Sometimes it is still easier to identify subacute ovaritis, for the ovary descends into Douglas's pouch, and may be there felt by the finger in the vagina, as an ovoid body, about two inches long, more or less fixed by peritonitis, or else it may be a fugitive body retreating from the finger, to return to it by a kind of *ballottement;* and when this body can be seized, it seems to be semi-elastic, and gives to the patient that overpowering kind of sickening pain already mentioned.

It is not, however, to be taken for granted that an ovary must be inflamed because it can be felt in Douglas's space, for pelvi-peritonitis and salpingitis may by degrees dislocate the ovary, and force it down into the recto-vaginal space, as occurred in a case related by Bernutz, who, after death, found the ovary perfectly healthy. Neither should it be forgotten that there are on record some dozen cases of the ovary having been wrenched from its normal attachments by the gradual growth of some tumour, to which it had become intimately united, and that the ovary has then grafted itself in some out-of-the-way part of the pelvis. The absence of the characteristic pain in these extremely rare cases might enable the physician to conclude that the ovary was not inflamed, had not that peculiar pain been sometimes found wanting in evident cases of subacute ovaritis. It would be fortunate if there were no other obstacles to the diagnosis of an inflamed ovary felt in the recto-vaginal space, but this space may be occupied by several other kinds of round, semi-elastic, painful bodies, besides the ovary.

A rounded mass of old false membranes, in close apposition to the womb, has been mistaken for the fundus uteri; this is a mistake that should be soon rectified by means of the uterine sound introduced into the womb, but it might be very difficult to disprove that it was not an enlarged ovary. Perhaps the most common cause of erroneous diagnosis is owing to the presence, in the recto-vaginal space, of an abscess of the infundibular extremity of the oviduct; and in one of Dr. Siredey's cases, what he thought was a tubercular ovary proved, after death, to be an irregularly shaped mass of hypertrophied fimbriæ.

In one of Dr. Mercier's cases, a swelling on each side of the womb, evidently detached from it, was supposed to be an inflamed ovary; after death, however, these swellings were found to be collections of tubercular matter in the infundibulum of the oviducts. In like manner, one of Bernutz's cases shows how well two ovaries in the recto-vaginal space may be imitated by two obliterated and enormously distended oviducts, twisted behind the womb, and united at their

extremities, as when a man joins his hands after crossing his arms behind his back. In this case the extremities of the oviducts could be felt below the os uteri.*

The lesson taught by these cases is, that rounded bodies found in the recto-vaginal space should be interpreted by the previous history of the case. When a swelling, similar to an enlarged ovary, is found in the recto-vaginal space of a patient who has long suffered from the catamenial symptoms of subacute ovaritis, this complaint is probable, and certain should pressing of the ovary cause its characteristic pain.

Rectal examination.—I have hitherto attempted to show what information can be obtained, by combining an abdominal with a vaginal examination, so as to avoid making a rectal examination. Should it be necessary to do so, it enables the observer to better ascertain whatever has been made out by a vaginal examination, for, as the ascent of the finger up the rectum is only limited by the length of the index, as the walls of the rectum are elastic, and the passage is gifted with a certain amount of movability, the finger can sweep round the posterior aspect of the womb, recognise any marked increase of size of the ovaries, and is better able to distinguish, one from another, the various abnormal growths, of which I have just shown the possibility, alongside or behind the fundus, or in the recto-vaginal space. When one finger affords insufficient information, by introducing the medius as well as the index, you will penetrate about an inch deeper, and the two fingers will better enable you to fix a movable body in the recto-vaginal space, provided you firmly press down with the left hand the opposite portion of the abdominal walls. Even by this searching mode of exploration, I have occasionally found it impossible to identify the healthy ovary, when the pelvis was deep and the womb high placed, but it may be affirmed that the ovary cannot be increased to double its usual size without being thus easily detected, and identified as subacutely inflamed, by being oval or round, with a smooth or rather indented surface,

* Bernutz, vol. ii, case xix.

with a semi-elastic resistance to a pressure that brings on characteristic pain; so when you are attending a young unmarried woman, and the relatives grumble at the slowness of her restoration to health, and insist on your doing whatever can be done to attain that object, suggest chloroform and a rectal examination.

Double touch.—How to diagnose subacute ovaritis with the greatest amount of precision is the object of this paper; but you will, of course, seldom feel justified to make a vaginal or a rectal examination of young women suffering from a complaint that menaces no danger, and it is only on very rare occasions that you will examine even a married woman by what I have called the "double touch." To do so, the patient being in bed, you will place her on her left side, and pass one or two fingers of one hand into the vagina, and one or two fingers of the other hand into the rectum. By this means it is easier to fix a foreign body in the recto-vaginal space, so as to study its outline, consistency, and sensitiveness. I should reprobate any attempt to more precisely diagnose subacute ovaritis, by the forcible introduction of the whole hand into the rectum, as lately recommended for the perfect diagnosis of pelvic tumours. Indeed, I think it most dangerous to have recourse to such a proceeding, whenever the history of the case tells of chronic inflammation of any of the sexual organs; and precision of diagnosis would, in these cases, be uselessly bought at the expense of the rupture of some collection of noxious fluid lying dormant in the ovaries, the Fallopian tubes, or the broad ligaments, an accident that would inevitably lead to fatal peritonitis.

I have shown that in some cases the diagnosis of subacute ovaritis may be clearly made out, and that in many others it is made extremely probable by the coincidence of a fixed ovarian pain, with the habitual prominence of some kind of menstrual disorder, in the absence of sufficient uterine disease to explain the patient's sufferings. I own that there is some uncertainty about the diagnosis of subacute ovaritis, in young women from fifteen to twenty-five years of age, unless they be married; but the same uncertainty also attends the

diagnosis of the uterine disease, or in other words, we can seldom attain to a precise diagnosis of diseases of the sexual organs in young women, unless they be married. Necessarily debarred from all accurate examination of unmarried women from fifteen to twenty-five, diseases of the sexual organs are masked by, and mistaken for, diseases of menstruation, and we are still in the habit of giving particular names, and of treating as so many distinct complaints *mere* symptoms of unrecognised disease, because we cannot permit ourselves to identify the pathological states out of which they spring. Nevertheless, since I drew attention to the fact, all advanced gynæcologists admit, that there must be some structural change going on in the ovary when, in addition to fixed pain in the ovarian region, young women have too little or too abundant menstrual flow, and when hysteria coincides with ovulation.

It was taught that very young women could not suffer from inflammation of the womb until Dr. H. Bennet demonstrated the fact by post-mortem examinations, published in the second edition of his work; but very few pathologists will now deny that such cases are much more common than is supposed, and that without examining a young woman she may be considered to suffer from inflammation and ulceration of the cervix if she has an habitual yellow discharge, in addition to habitual lumbar and sacral pains, confirmed debility and other symptoms of uterine disease.

You are all of you frequently consulted about young unmarried women, from fifteen to twenty-five, and you are obliged to treat your patients without any claim to precision of diagnosis, so it may be well to conclude by sketching the line of conduct that should be followed in such cases.

When a young unmarried woman is brought to you, evidently suffering from some disease of the sexual organs, say to yourselves that the symptoms may depend—1stly, On mere functional derangement, the result of some constitutional disturbance. 2ndly. The symptoms may be caused by functional derangement, resulting from subacute ovaritis

and uterine congestion. 3rdly. The symptoms may depend on functional derangement brought on by congestion of the body of the womb, and inflammation and ulceration of the cervical mucous membrane.

In whichever of these three classes you include your patient, a well-appointed hygiene, for menstrual and intermenstrual periods, is what will chiefly conduce to her cure, and, when combined with tonic treatment, will be sufficient to cure functional derangements of the sexual organs. If you suspect subacute ovaritis from what has been here stated, in addition to the hygienic and tonic treatment already mentioned, apply six leeches to the suspected ovarian region, soon afterwards paint it daily with oleate of mercury for six weeks, and then, if necessary, try counter-irritants to the same region.

Should you suspect uterine disease, in addition to the above-mentioned hygienic and tonic treatment, order injections with a solution of acetate of lead to be made twice a day, and ascertain that they be effectually made, and with a suitable instrument; persevere with this plan of treatment for three months, and even longer, for it often checks the yellow discharge and other signs of uterine inflammation. So long as you keep mischief in check by this plan of treatment, you may still further postpone a vaginal examination, but do not postpone it indefinitely should the yellow discharge continue unabated. Do not listen to those who will tell you "this so-called ulceration is of no importance: pay no attention to it;" if you do you will allow a morbid habit to obtain in the cervix which will extend to the body, and ultimately cause that aggravated form of uterine inflammation that you occasionally meet with in an unmarried woman, who will tell you she has never been without some kind of vaginal discharge ever since her first menstruation. It more frequently, however, happens that the neglect of surgical aid, in cases of habitual purulent vaginal discharge, leads to marriage being immediately followed by a severe attack of uterine inflammation. Marriage only aggravated a pathological state that had been insidiously progressing for

years, and as you will find these cases very difficult to cure, it is best to prevent their occurrence.

In attending cases of this description you are sure to be blamed for the tediousness of the treatment, or for its comparative inefficacy. For doing the very best you will be blamed, whereas blame rightly attaches to the practitioner who, twenty years before, had his attention drawn to the persistence of a purulent vaginal discharge in this very case, and who neglected to give due attention to the symptom.

After all, it is not much to be wondered at, if to avoid wounding the feelings of our patients and of their relatives, we should delay as long as possible, or altogether avoid, the examination of unmarried women from fifteen to twenty-five years of age; but then you have no right to expect that it should be possible to diagnose, with great precision, the diseases of the sexual organs from which they may suffer.

Dr. Barnes having made some remarks on ovaritis as secondary to uterine displacements and abnormalities,

Dr. Wynn Williams stated that his experience led him to quite coincide with the remarks made by Dr. Barnes—in fact, he very rarely met with a case of ovaritis without some uterine complication unless caused by direct violence, as in a case he had at present under his care, where a young woman had received a violent blow from a bell. He fully believed that in almost all cases the uterine mischief preceded the ovarian, and his experience taught him that on the removal of the uterine ailment the ovarian would soon subside. The same remarks, in fact, apply to the ovary in the female as to the testicle in the opposite sex. How rarely does the surgeon meet with orchitis without previous inflammation of the urethra, &c. Dr. Williams believed that flexions were a great source of chronic ovaritis, especially anteflexions, as in these cases there is, owing to the os uteri being turned upwards and forwards, a greater impediment to the flow of the catamenia, and thus a continuous source of irritation is kept up month after month with irritating secretions from the canal of the uterus, causing ulcerations or excoriations of the os and cervix. Rectify the position of the uterus, and from that time frequently all pain in the ovary and elsewhere ceases, the next menstrual period commencing and proceeding to its termination without pain or discomfort. Thus the sufferings are not protracted over three months, but cured in as many

weeks. Dr. Williams has at present under his care several unmarried females who have been wearing a stem and shield for months, and who cannot be prevailed upon to have them removed, dreading a return of their sufferings. As regards the pressing of the uterus on one side, and by its strain causing a feeling of pain and sickness, any pressure or movement of the organ in cases of metritis will cause similar painful sensations, and therefore as diagnostic of ovaritis cannot be relied upon.

Dr. Heywood Smith wished to remark, with regard to the double touch, that whereas Dr. Tilt had spoken of using one hand to explore the vagina, and another to examine the rectum, he (Dr. Heywood Smith) considered that the use of the two hands was to a certain extent awkward, as the thumbs of each hand were in each other's way; whereas he considered the best way of using the double touch was to use the forefinger of the right hand for the vagina, and the middle finger of the same hand for the rectum. By this means a more accurate apprehension of the relative position of the various parts was the more easily gained, and the left hand was free to make pressure on the hypogastric region, and so better information was obtained with regard to pelvic swellings than by using two hands. Then, with regard to what the President had stated as to ovaritis being associated with or consequent upon flexion or other morbid states of the uterus, he must say, as far as his experience at the Hospital for Women went, that he frequently found cases suffering from ovaritis in various stages unconnected at all with any flexions or misplacements of the uterus or with any metritis.

Dr. J. J. Phillips said that his experience was that so-called subacute ovaritis was a very frequent cause of dysmenorrhœa, and he believed that this ovaritis frequently existed independent of any uterine flexion or peculiar conformation of the cervix uteri. It was very common to find a swollen, hyperæmic, probably inflamed ovary as the only evidence of disease in cases of dysmenorrhœa. The fact stated by Dr. Barnes, however, could not be controverted, that in a large class of cases dysmenorrhœa was due to uterine flexion or some uterine abnormality, and by appropriate treatment not only was the pain relieved, but also the congested state of the uterine appendages. A suitable selection of cases was, however, important, for some of the most troublesome cases of ovaritis and periöophoritis had their origin in mechanical interference with the neck of the uterus by incision or dilatation.

Dr. Gervis remarked that the truth might lie between the two views which had been expressed; and that while primary subovaritis was probably rare, yet it certainly might continue to exist as a result of various uterine affections, such as chronic

endometritis and mechanical dysmenorrhœa after these affections had been cured.

Dr. TILT thought some of the observations of the two first speakers were uncalled for, as he had carefully stated that if, owing to an error of diagnosis, disease of the cervix was found, instead of subacute ovaritis, or if both diseases were found when only one was anticipated, then the first thing to do was to cure the diseased cervix, as it was difficult to estimate too highly the beneficial effect of doing so, or whatever other disease of the sexual organs might also be present. Dr. Tilt had always taught that mechanical obstructions to the menstrual flow and uterine malpositions required special treatment, and he intentionally omitted to treat of them in the present instance, because they were not of very frequent occurrence from fifteen to twenty-five; whereas he had come to the conclusion, that subacute ovaritis and cervicitis were then common and were often treated as diseases of menstruation. Dr. Tilt did not think that the analogy between the testicle and the ovary should be pushed very far, because the testicle was not subject to any monthly process similar to ovulation. Dr. Tilt observed that Dr. Heywood Smith would find his mode of practising the double touch described in the first edition of his work on 'Ovarian Inflammation;' but he thought with Dr. Oldham that more information could be obtained by making the examination as it had been described in the paper that had been just read.

NOVEMBER 5TH, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—33 Fellows and 3 visitors.

A volume of photographs of gynæcological and obstetrical instruments invented by Prof. Lazarevitch, and another of the pelvis collection in the University Maternity of Charkoff, were presented by him. The 6th vol. of the 'Transactions of the Clinical Society,' and a work 'On the Treatment of Children, by Dr. C. E. Buckingham, were also presented.

John Goldsmith, M.D., was declared admitted as a Fellow of the Society.

The following gentlemen were elected Fellows:—L. E. Desmond, M.D. (Liverpool), W. J. H. Lush, M.R.C.S. (Andover), J. A. Macdonald, M.D. (Woburn), Marshall Monckton, L.F.P.S. Glasg. (Hurstpierpoint), Arthur Nicholson, M.R.C.S., and Joseph Smith, M.R.C.S. (Jersey).

The following gentlemen were proposed for election:—Mr. J. J. Bailey (Stockport), Mr. W. A. Concanon (Pill, Somerset), and Mr. R. W. Parker.

Dr. PLAYFAIR exhibited a specimen of malignant sarcoma, apparently originating in the right broad ligament, but

which at death nearly filled the whole abdominal cavity. The case was interesting because the patient was admitted to the hospital, in the seventh month of pregnancy, under the supposition that she had an ovarian tumour. By the side of the uterus existed a smooth, apparently fluctuating, and perfectly movable growth about the size of a melon. There was no doubt cast on the ovarian origin of the growth, but as the pelvis was not encroached on in any way the patient was advised to go on to her full time, and left the hospital. She was delivered at term after a perfectly natural labour. Three months afterwards she was admitted almost moribund. The whole abdomen was occupied by a firm irregular mass, extending up to the liver, which it displaced upwards, as was shown by percussion. The original tumour felt during pregnancy was still to be readily made out, with an area of resonance between it and the solid mass above. It did not seem to have enlarged. The uterus was now absolutely fixed in the pelvis, and a very fetid discharge oozed from the cervix.

The diagnosis now was malignant disease of the peritoneum, plus the original ovarian tumour. The patient shortly afterwards died, and the whole was found to consist of a single mass, apparently originating in the region of the right broad ligament. The supposed ovarian tumour was identical in structure with the rest, and was attached to it by a narrow deep-seated portion beyond the reach of palpation. The uterus and ovaries were healthy. The fetid discharge from the uterus was accounted for by the existence in its cavity of a semi-organized clot attached to its wall, and about the size of an orange. The structure of the uterus itself was not implicated in the malignant disease.

The points of interest in this case appeared to be—

1st. The difficulty and obscurity of the diagnosis during pregnancy, there being nothing in the physical condition of the patient to cause the least suspicion of the real nature of the tumour.

2nd. The extremely rapid growth after delivery. This pointed to the probability of the tumour having been kept in

abeyance, as it were, possibly by the presence of the gravid uterus, a start having occurred immediately after delivery.

Dr. PLAYFAIR exhibited a specimen of necrosis of the pubic bones following delivery. He said that this form of puerperal disease was of extreme rarity, the only cases he had been able to meet with being two narrated by Trousseau in his 'Clinical Medicine,' which were apparently of a somewhat similar nature. The particulars of this case had been already recorded in the 'Lancet' by his friend and former house-physician, Dr. Eardley-Wilmot, but the specimen itself would, he thought, prove interesting to the Society. It was taken from a young woman, aged twenty-three, who was admitted into King's College Hospital six weeks after the birth of her first child. Up to the time of her labour, which was easy and natural, she had always enjoyed good health. Three weeks after delivery an abscess burst at the anterior portion of the left labium minus, and discharged a small quantity of foul-smelling pus. She remained at her own home until her admission, when she was found to be excessively emaciated and weak. She complained of slight pain and considerable tenderness in the left inguinal region, and of inability to straighten her left thigh. There was a highly offensive purulent discharge from the vagina, but nothing could be made out on vaginal examination, the uterus being apparently healthy. Subsequently the upper part of the left thigh became œdematous, and this went on increasing until two incisions were made, from which some bad smelling pus was evacuated. Three weeks after admission she died from exhaustion.

On post-mortem examination the pubic bones were found to be entirely necrosed, and the symphysis was disintegrated and destroyed. From the symphysis extended a large sac partly filled with fetid pus. It descended on the anterior and lower part of the vagina, with which it communicated by means of a small orifice situated three quarters of an inch above the anterior termination of the left labium minus. It then passed outwards and downwards to the left groin, com-

municating with the two artificial openings in that region. The whole cavity was of a black colour. There were various

A. Opening into vagina.

burrowing sinuses around, and between the muscles and reaching towards the left cotyloid notch, which, along with

the head of the femur, showed signs of commencing disease. The uterus was well involuted, and, with its appendages, was healthy.

Dr. Playfair remarked that Trousseau attributed the occurrence to the extension of inflammation from the pelvic joints, which he assumed to be in a greater state of relaxation after delivery than usual. This, no doubt, was a possible explanation, but it seemed to him not unlikely that the disease originated in some obscure form of septicæmia, giving rise to a low form of inflammation in the bones and their periosteum rather than in a purely mechanical cause.

Dr. Squarey made some remarks on the cure of flexions of the uterus by flexible stems, and exhibited a flexible stem invented by him.

Dr. Aveling exhibited a new instrument which he called a "loop saw," which he believed might be used with ease and advantage in some cases where the écraseur was at present employed. It consists of two tubes with pulleys at the upper end, over which a loop of whip-cord or chain works. The two tubes are united by a hinge at the handle and the tumour is divided by drawing alternately upon the ends of the cord. As the linear friction of the loop divides the tissues from below upward there is no passing of the cord over the tumour, as is the case with the écraseur.

CASE OF SPONTANEOUS SALIVATION ASSOCIATED WITH PREGNANCY.

By Archer Farr, L.R.C.P.

(Communicated by Dr. Black.)

M. A—, the mother of four children and now pregnant for the fifth time, commenced to salivate profusely when about two months advanced, the flow of saliva being so excessive as to cause her to use two dozen pocket-handkerchiefs a day, and, according to her own statement, equalling in quantity three pints per diem. When at home she would sit with a hand-basin before her and the saliva would literally pour from her mouth. There was no history of her having taken mercury, no enlargement of the salivary glands existed, and there was no fœtor of the breath. The tongue was quite clean, but there was pain and occasional vomiting after taking food.

Her case was treated with bismuth and opium to the relief of the pain and sickness, but without benefit as regards the salivation. She continued to salivate thus excessively up to close upon the period of her quickening, by which time she had become so reduced and emaciated that I resolved, with the concurrence of a second opinion, to induce premature labour; but on waiting upon her for this purpose I observed a marked diminution in the amount of saliva secreted. I therefore desisted from the operation and enjoined her to exercise her patience a little longer, and to give me an opportunity of seeing if any further abatement of the symptoms would take place. Two days subsequently she felt the movements of the child for the first time, and the almost immediate relief she experienced was inexpressible. All the dyspeptic symptoms ceased, the appetite returned, and the salivary function became rapidly restored. She quickly regained strength, requiring no further medical treatment up to the date of her confinement, when she gave birth to a fine child, and at present both mother and child are doing well.

ON THE COMMON SKIN DISEASES OF CHILDREN.

By Alfred Wiltshire, M.D., M.R.C.P. Lond.,
PHYSICIAN FOR THE DISEASES OF WOMEN TO THE WEST-LONDON HOSPITAL; ASSISTANT-PHYSICIAN ACCOUCHEUR TO ST. MARY'S HOSPITAL; PHYSICIAN TO THE BRITISH LYING-IN HOSPITAL; LATE MEDICAL INSPECTOR TO HER MAJESTY'S PRIVY COUNCIL, ETC.

In preparing the following paper the writer's aim has been twofold—first, to describe succinctly, and he hopes simply, the affections of the skin met with in everyday practice; and, secondly, to detail the treatment he has found most efficacious. The rarer forms of skin disease are not described, not, however, from lack of interest in them, but because to deal with them even briefly would unduly lengthen this communication.

The forms of skin disease which it is proposed to consider are comprised in two classes—*first*, the parasitic—scabies and herpes tondens (or ringworm); and, *secondly*, the inflammatory—eczema, impetigo, erythema, and intertrigo.

These forms will be admitted on all hands to be common enough, and, apart from other considerations, their very frequency constitutes a strong claim on the attention of the practitioner of pediatrics.

General observations on parasitic skin diseases.

It is the writer's decided conviction that really healthy children rarely suffer from parasitic affections of the skin, whether of animal or of vegetable origin. It must be obvious to all that parasites, especially of the vegetable kind, abound; and observation teaches us that numbers of persons escape who are certainly abundantly exposed to the chances of contagion. Why do they escape? The answer must be, I apprehend, because the parasites do not find in them a nidus or soil favorable to their development. One of the

ablest dermatologists of the age, Mr. Jonathan Hutchinson, says, in a late lecture,* "There is good reason for believing that cryptogams will flourish only on some skins; and every one must be familiar with the very different kind of irritation which fleas and bugs produce in different individuals." This mode of habitually regarding parasitic skin diseases has, the writer believes, been of great service to him, since it has led him to consider the improvement of the patient's general health as the first thing to be aimed at; the merely local treatment, highly important as it undoubtedly is, occupying a secondary position. This attitude towards the parasitic class of skin diseases has been attended by a very gratifying meed of success in treatment, inasmuch as, combined with celerity at least equalling that of other methods, much more durable results are obtained, the tendency to relapse or rather re-invasion being infinitely lessened. Usually, then, the presence of a parasite on the skin should be held to be indicative of lowered tone, and the more widely spread are the evidences of the intruder the more certain does it become that the general health is depressed. The practical outcome of this is obvious: if we would succeed in dealing with this class of skin diseases our first endeavours should be directed towards the improvement of the general health. This the writer believes may be best attained by (1) better hygienics, using the word in its broadest sense, including an improved or amended dietary; and (2) by certain drugs, among which cod-liver oil and steel wine hold the first rank. It is unnecessary to go into detail on these several points; it is obvious that better air and food, baths and rigorous cleanliness, are all important. As regards drugs the treatment considered most appropriate will be mentioned when discussing each disease.

The parasitic skin diseases which it is proposed to consider embrace an example of each form, viz. the animal and the vegetable; and first we will take *itch*, which belongs to the former.

Scabies, as is well known, depends upon the presence of

* 'Medical Times and Gazette,' February 22, 1873.

an insect, the *Acarus scabiei* or *Sarcoptes hominis*, the female of which, burrowing in the skin for the purpose of depositing her eggs, excites an inflammation, which causes itching and provokes scratching. The male insect also burrows, but to a much less extent. In children the favourite seats of the itch eruption, or, more correctly, habitat of the insect, a point of considerable clinical importance, are as follows :—In *young infants* the soles of the feet, because the skin is here very soft. It is seldom seen on their buttocks, because babies wear napkins. Children a little older, who are often carried in arms, but do not wear napkins, show the eruption chiefly on the buttocks, but also on the hands. This arises from contact of the nurse's arms and hands with the naked buttocks of their charges. Children who can run about and are not often carried in arms show the eruption in the usual well-known place, viz. between the fingers, but also on the exposed parts of the arms and legs and sometimes on the buttocks. It is remarkable that the face is rarely if ever attacked by the insect. It is said that very young children who sleep with their heads under the bedclothes are sometimes so affected. As in older persons, the presence of the itch insect is liable to excite various other eruptions besides that proper to itch, which may be called a vesicle, raised by the burrowing female. Thus, to mention the complicating eruptions in the order of frequency with which they commonly present themselves, we may mention eczema, ecthyma, and urticaria, which may appear separately or together. Usually, however, except in chronic and neglected cases, or in patients with very irritable skins, they do not coexist. Lichenous and other eruptions may also appear. Diagnostic difficulty sometimes arises from the masking of the original affection —the scabies—by that which is secondary to it, viz. the eczema, erythema, or urticaria, as the case may be, and therapeutically the recognition of this is important.

Treatment.—This, in the first place, should be directed to the improvement of the general health, since scabies, even if it be contracted, rarely, if ever, spreads or persists in

quite healthy and robust children. An amended or better regulated diet will sometimes alone suffice for this. In the majority of cases, however, some form of iron (to be chosen according to circumstances and indications) and quinine, or cod-liver oil, are required; usually cod-liver oil and steel wine answer admirably, but the steel wine should be made with sherry and that good of its kind, for thus made it is very much more digestible (and physic, like all other ingesta, has to be digested) than when otherwise compounded. Locally, it is necessary to exercise great discretion when there is much eczema. In this case a warm bath containing a little borax or a small quantity of carbonate of soda, together with fine oat, or, for better patients, almond meal, should first be given. This will soothe and cleanse thoroughly without irritating the sore skin. After the bath, if the eczema be very severe, it is best to use only zinc ointment at first or until the eczema has subsided somewhat, and now and then this alone will suffice, even when the presence of the itch insect has been previously demonstrated. When the eczema is less extensive and severe, and, generally speaking, as a rule, even in the presence of eczema, a mixture of zinc and sulphur ointments should be used; the proportions may vary according to the requirements of the case; equal parts serve well. The same may be said when pustules complicate the attack, but sulphur may, and indeed should, be used much more freely in the presence of pustules than of eczema, there being much less risk of irritation.

The cardinal rule in local treatment should be always to treat the itch first and chiefly, and for this purpose nothing in my experience equals sulphur.

The application of a lotion containing borax or a little carbonate of soda in elder-flower water will generally give great relief when there is much irritation of the skin, and especially in the presence of urticaria and lichenous eruptions. In all cases washing the skin with fine oat- and almond-meal may be resorted to if required. No ointment containing sulphur should, as a rule, be used longer than

three days, else there is great risk of causing the eczema and irritation of the skin which that drug is liable to set up. At the end of three days, supposing there be no lesion of the skin contra-indicating it, the patient should have a full bath of soap and warm water and afterwards should be clad entirely in clean clothes; he should also have clean sheets, pillow-cases, towels, &c. The child's nurse should also be thoroughly treated in like manner, scrupulous care being taken to avoid all sources of new contagion. Any eczema remaining at the end of three days, and in severe cases there is usually some, will generally disappear without further or with only simple treatment.

A common source of difficulty in scabies affecting children is in respect of diagnosis, and particularly when the attack is complicated in the manner described. If, however, we remember that in the young infant the *feet*, in the older infant the *buttocks*, and in the little child the hands and other soft parts of the exposed skin, are the favoured seats of itch, we shall not often err, and above all the diagnosis may be rendered absolute by the detection of the insect. Syphilitic eruptions on the feet of young infants are so different from scabies that they need never cause embarrassment.

It only remains to say that the treatment mentioned is that which has yielded me the most satisfactory results. I am aware that other plans, doubtless very good, have been recommended, but I can assure the foregoing as thoroughly reliable.

Herpes tondens or Ringworm (the common variety, not Favus) is the other parasitic skin disease which it is proposed to consider, and this depends upon the presence of a vegetable parasite, the *Tricophyton tonsurans*. The sources whence it is derivable are many, for not only may it be contracted from other human beings, but also from the lower animals, and I incline to the belief that many of our household pets are not altogether free from suspicion in this matter; it is said, indeed, that the fungus of mange in the cat is identical with that in man, viz. Tricophyton (Aitken). Most commonly, ringworm attracts attention when it occurs

in the head, on account of the destruction of the hair, but it is by no means confined to the scalp or more hairy parts, though, from the fungus destroying the hair and exciting inflammation of the hair-bulbs, its ravages are more conspicuous there than in smoother parts. The appearance of ringworm is well known—the circular patches, like the fairy rings of the meadows, and probably formed in precisely the same manner, being familiar even to the laity. Though the hair is short and broken, owing to the splitting and destruction of the tubes by the spores and filaments of the parasite, there is no absolute baldness, as in Favus, which depends on a much more virulent parasite, the *Achorion Schöenlenii*. When the parasite attacks the hairy parts the disease is readily enough recognisable as ringworm, but this is not always the case when it invades the smooth or downy parts. Here it is apt to be called Herpes circinatus, and its true parasitic character may be overlooked. I am aware that some consider the appearance of the parasite to be secondary to a lesion of the skin, and this may possibly be so, though the evidence on this point is far from conclusive. In almost every, if not every, case the presence of the parasite can be demonstrated, and in support of the opinion that it is the primary element in the lesion the opinion of Von Bärensprung may be quoted, who found that some of the scales of tinea, from one of the lower animals, containing spores and mycelium of the fungus Trichophyton, produced a well-marked spot of tinea circinatus in the course of a few days. The risk of non-recognition of the disease is increased when it is accompanied by much itching (from lice, &c.), when eczema, impetigo, and the like, may be superadded and its more ordinary symptoms be thus marked. Ringworm is, as Hutchinson well says, "a disease almost peculiar to children," and is often a source of great trouble and annoyance alike to parents and doctors.

Treatment.—First of all, improvement of the general health; this is of cardinal importance. Iron wine and cod-liver oil as adjuncts to good living are, therefore, very useful. Locally, in the absence of any complication, I have found vesi-

cation an effectual mode of treatment, but it should not be resorted to in many cases.

Any vesicant may be used, but I have been best pleased with the application of a strong solution of iodine. But on the whole, perhaps, white precipitate ointment is preferable, since with that there is no risk of the ugly consequences which sometimes attend blisters in children. (For my own part I may say that, except for ringworm, I almost entirely eschew blisters in children's practice.)

Solution of sulphurous acid is a good and harmless remedy, but it should only be applied after all fat has been removed from the skin by means of ether or a solution of caustic potash. Sulphurous acid, *well applied,* is an excellent remedy. Carbolic acid may also be used in solution.

It is important that the head and other parts of the body should be thoroughly searched for commencing spots, so that the risk of auto-contagion may be avoided. All articles of dress likely to convey the germs of the parasite, such as hats, caps, &c., should be put aside or be treated with a parasiticide. Ironing with a hot iron, the fumes of burning sulphur (in other words, sulphurous acid in vapour), or washing and boiling such articles as are washable, are all serviceable methods and may be used where suitable.

General Observations on Inflammatory Skin Diseases.

In the foregoing remarks the writer has endeavoured to set forth the advantage and importance of regarding a predisposing condition of body as the chief element in skin disease of parasitic origin. He would now beg to draw attention to the great advantage to be derived from regarding the second class, comprising eczema, impetigo, erythema, and intertrigo, as essentially inflammatory, that character underlying the whole of these forms, which are merely varieties of dermatitis, differing rather as to seat and degree than in essence. "Eczema," says Mr. Hutchinson, "is really a name for a symptom, and not the disease itself," and the

same may with equal truth and force be said of impetigo, erythema, and intertrigo.

They are all inflammations of the skin, and the names they bear have been given to the features which are believed to be chiefly characteristic of them.

Erythema and Intertrigo.

It will, perhaps, be well to begin the consideration of inflammations of the skin by referring to the above, which are probably the simplest forms of dermatitis. They may well be considered together, since if not identical they are closely allied and frequently coexist, especially in the neighbourhood of the buttocks and groins.

By some intertrigo is spoken of as "erythema intertrigo," which implies that it is an intertriginous form of erythema, and there can be no objection to this if the differences between it and simple erythema be borne in mind.

Erythema consists in a diffuse redness of the skin, accompanied usually by more or less heat, and may appear anywhere on the body. It is a low form of dermatitis, and is usually caused by some external irritant—in children most commonly by urine, fæces, or some unhealthy secretion. It arises when the surfaces of two opposing skins are continuously in contact and the natural secretions are not removed by washing. It is, therefore, often seen in the flexures or folds of the skin, and especially in fat children. It is sometimes seen in a diffuse form on the nates of children, and is commonly caused by neglect on the part of the mother or nurse in changing the child's napkins. Another fertile cause is the dirty practice of drying and reapplying napkins that have been soiled only by urine or but slightly by fæces also. This objectionable practice is common among the poor, and the rough napkins, impregnated with urine salts, form an efficient irritant to the nates of the young child. It may also arise from a too vigorous application of soap, and especially of the coarser sorts. It is seen also in febrile and

intestinal catarrhs, and rarely fails to appear after a time in most of the chronic affections of children. The commonest seats of erythema are, in the young infant, upon the nates and around the anus and genital organs (rarely in them elsewhere), and in older children, in addition to the foregoing seats, it is seen at the flexures of the limbs, about the folds of the neck, &c. Usually, and especially if chronic and about the buttocks, when the erythematous surface is pressed by the finger a yellowish white spot is left, which only slowly resumes its dusky red colour. There is rarely, if ever, itching in simple erythema.

Treatment.—Generally we should seek to improve the health and correct unhealthy secretions. Thus, when the bowels are deranged, as often happens, an occasional but not habitual dose of rhubarb, grey powder, and soda, will prove very serviceable. Tonics are also useful.

Locally, scrupulous cleanliness should be observed. For the purpose of ablution nothing is so good as almond or oatmeal in water. The softest diapers should be used. The parts may be dusted with a mixture of bismuth and starch powder, or, if threatening to crack, with bismuth and finely sifted oxide of zinc, which latter is best applied by means of a muslin bag; lycopodium may also be used, and now and then a curd make by adding Liq. Plumbi to new milk is very soothing.

Intertrigo is really an exaggerated form of erythema which has gone on to destruction of tissue, leaving ulcer of greater or less extent and depth. Sometimes these assume serious proportions. I have myself seen huge excavations of both groins from this cause alone in an otherwise healthy and well-nourished, though, as far as cleanliness was concerned, neglected child. Intertrigo, indeed, may safely be said always to originate in neglect. When two folds of skin are kept in constant apposition and the natural secretions of the part are not removed by washing, after a time, longer or shorter according to the constitution of the patient, being especially short in the scrofulous, an erythematous blush, generally accompanied by some angry looking miliaria, shows itself.

If the neglect be continued ulceration begins, and a kind of excavated fissure is formed. Not unfrequently this is followed by glandular enlargement, and often it is only the complaint of the child arising from this cause which attracts the attendant's notice. It is well occasionally to look for oneself at the flexures of infants under treatment for any affection, since erythema, and particularly the intertriginous form, is frequently overlooked by those who have charge of them. Intertrigo is generally met with in very fat children. It is worthy of remark that the discharges do not crust, as in impetigo.

Treatment.—Usually intertrigo is very amenable to local remedies. The principle to be kept in view in all cases is the separation of opposed surfaces. This alone, with cleanliness, will sometimes suffice for cure; but in bad cases, and in fact as a rule, since the sooner we can cure all such cases the better, the cure is expedited by the application of zinc ointment or by dressing with oxide of zinc. Whichever we use it should be applied on the outer surface of a double fold of lint, like dressing the outer side of the covers of a book, so as to insure the separation of the opposed skins. Some forms of erythema, especially when depending on unhealthy secretions, are much less tractable than the intertriginous form usually is, and our first care should then be the general health. Well-made calamine ointment is sometimes very useful. Now and then more stimulating applications are needed, among which may be enumerated camphor lotions, lead and opium, nitric acid and opium, potassio-tartrate of iron, &c.

Eczema.

This disease is the great centre piece of skin affections. It is the commonest and by far the most important.

It is before all things important to bear in mind the true pathology of this form of skin disease. It is a dermatitis or inflammation of the skin, and has well been likened to that form of inflammation of the mucous membrane which we call

catarrh. "The inflammation is limited to the superficial layers of the skin, and is accompanied by a serous exudation on its free surface," says Niemeyer. Most people, without having any very definite ideas as to the relation that exists between them, are aware that there is some connection between eczematous eruptions and certain internal complaints. Regarding them as analogues one of the other, and both as due to inflammation accompanied by serous exudation, we acquire a clearer notion of their true relationship.

According to Trousseau, Dr. Duclos, of Tours, attributes what he calls "continuous asthma" to an eczematous eruption on the mucous membrane lining the air-passages, which he is said to treat successfully by means of sulphur. Eczema may arise and exist alone, as when it originates in a constitutional taint, or, as we saw in the case of scabies, it may be superadded to and engrafted upon another affection of the skin, to which it bears the relation of an epiphenomenon. In such cases it not unfrequently masks the primary disease, thereby rendering diagnosis difficult to those who happen to be unacquainted with this fact.

Like catarrhs it may originate from within, as when it depends on constitutional dyscrasiæ or venous obstruction; or be excited from without, as when it is caused by irritants of various kinds, such as heat, the itch insect, mercury, sulphur, &c. Vesicles are found in eczema, but, owing to their minuteness and to their bursting easily, they are rarely seen. A more or less copious weeping of an acrid fluid, having an alkaline reaction and a peculiar odour,* is generally met with, but occasionally it dries up or is so small in quantity that only dry scales are produced.

From its presenting various aspects many names have been given to eczema which were supposed to denote the different forms of the affection, but being founded on no scientific principle this plan has the effect of confusing the

* My friend, Dr. Mapother, of Dublin, speaking of eczema, in his 'Lectures on the Treatment of Chronic Skin Diseases,' says that "a smell like that from goats often arises from decomposition of the sebaceous fatty matter, giving off caproic acid."

mind and burdening it with a number of useless if not misleading terms. It is better to regard the disease as an inflammation, and its different forms as variations due to seat, degree, and like accidental or non-essential circumstances.

There has been much discussion as to the exact seat of the disease. Niemeyer, as we have just seen, states that "the inflammation is limited to the superficial layers of the skin;" Biett thought it was in the vascular membrane of Eichorn, Cazenave and Bazin in the sudoriparous glands. Hardy thinks all the elements of the skin are involved.

Clinical observation would incline me to regard the eruption accompanied by serous exudation (*i. e.* eczema) as an inflammation of the upper layers of the skin (except when very chronic, when all the elements of the skin may be the seat of hyperplasia). That accompanied by a puruloid or sero-purulent secretion (*i. e.* impetigo) I regard as an inflammation of deeper layers, and this I believe would account for or explain why even in severe and chronic eczema we usually get no glandular enlargement, while in impetigo even of very short duration the lymphatics take alarm at once. It should also be noted that the reaction of the respective fluids in eczema and impetigo are opposite, being alkaline in the former and acid in the latter. Is it possible that this difference is due to difference of structure, and that to the acid quality of the secretion in impetigo is due the extreme sensitiveness of the lymphatic system? (Parenthetically it may be remarked that probably the acid belongs to the fatty series.) Like catarrh, eczema is a disease of the surface rather than of the parenchyma.

As already stated, a constitutional diathesis exerts a marked influence in the production of eczema. Thus, scrofulous children are very prone to it, as they are to catarrhs of the mucous membranes. The subjects of scrofulosis exhibit a remarkable proneness to implication of their epithelial structures, whether covering the surface or lining the cavities of the body; hence the relation between eczema and certain affections of the internal organs, as bronchitis,

enteritis, gastritis, &c. Rickety children are also disposed to eczema. On the other hand, we not unfrequently meet with cases where the patient is the subject of severe eczema, though otherwise in apparently robust health. Here some constitutional vice may underlie the affection, slight excitation sufficing to elicit it. I believe the offspring of gouty persons, especially if also scrofulous, are very prone to eczema. Indeed, the relations or pathological affinities of eczema are of singular interest.

Hardy, as well as Hebra, affirms the frequency of cancer after eczema, and Bazin goes so far as to say that cancer is the natural termination of eczema. Hebra it is, I think, who dwells upon the frequency of uterine cancer after eczema.

It may, perhaps, be said with truth that, as a rule, eczema in children is secondary to some constitutional state. Oxalate of lime is apt to appear in the urine of eczematous children, which sufficiently indicates perversion of certain normal processes.

In eczema, unlike erythema, there is great itching, which excites an uncontrollable desire to scratch, an indulgence in which rarely fails to aggravate the disease. It is not a little curious to observe that, however chronic or severe eczema may be, it does not usually excite inflammation of the neighbouring lymphatic glands, a clinical fact of some interest, which, according to my observation, is almost, if not quite, invariable.

This, as I have already implied, is doubtless owing to the superficial papillary layer alone being affected. In impetigo (and possibly in a few cases of *sharp* eczema), where the deeper layers of the corium are speedily involved, we may very quickly get glandular enlargement.

Eczema is the commonest disease of the scalp before and during the period of first dentition. Perhaps it most commonly occurs in a partial form on the face and head, these being its most frequent seats. Strumous children are prone to eczema at the flexures of their joints. The disease may also become general, and in this form is often a most serious and troublesome affection.

According to my observation, when arising from constitutional causes, the following is the order of frequency with which the various forms appear:—One or (usually) both sides of the face; the face and head; the flexures of the limbs; and the so-called universal form, a term which must not be accepted as literally correct, since some portions of the skin usually escape. But it must be borne in mind that, even when originating in a constitutional vice, local irritations are liable to determine the seat of the eruption. Thus, frequent washing of the face and limbs with coarse soap may determine and keep it up.

As in some other diseases, symmetrical arrangement of the eruption is very suggestive of constitutional origin. When originating in purely local causes, of which itch is probably the most common, it is generally seen on the parts of the body where the skin is softest. In very chronic and inveterate eczema the skin in time becomes thickened and indurated from inflammatory hyperplasia, but this is not often seen in children.

It is a matter of common observation that eczematous skin affections often alternate with disorders of the internal organs, as where the suppression of the eruption is at once followed by a cough or diarrhœa, or some other manifestation of a like kind. It is well known, too, that in some children eczema attends the cutting of every tooth, just as we see a diarrhœa or a cough under like circumstances, when it is called a "tooth rash" or "tooth cough," as the case may be. The gums should, therefore, be looked to. Improper or insufficient feeding is sometimes an efficient cause of eczema in young children, and too much care cannot be bestowed on this particular.

My own conviction is that sugar and starchy matters are very injurious in some cases, while in others the fault may be in an excess of nitrogenized food. In London, perhaps, the former error is the more common.

Treatment.—No disease of the skin tries the resources and skill of the practitioner more than this, and few anything like as much.

If a routine plan be adopted for every case, failure is certain to attend the practitioner's attempts in a large proportion of cases. It will have been gathered from the preceding remarks that cases of eczema permit of being arranged in two or three groups. Thus, there are those arising from constitutional causes, which may be divided into two classes—(*a*) with lowered vitality, and (*b*) with otherwise robust health. Then there are the cases which are due to purely local causes, whether external or internal, as when the itch insect or some surface irritant excites the eruption, or when it follows or attends or accompanies the evolution of a tooth or the ingestion of some indigestible morsel.

Careful differentiation, then, is requisite before determining upon a plan of treatment, and even when this has been determined upon it naturally divides itself into the application of local and general remedies.

General treatment.—When the health is depressed and nutrition has failed strict attention should, in the first place, be paid to diet. Anything likely to excite urticaria, such as starches and sugars, should be avoided, for the itching and irritation which accompany nettle-rash greatly aggravates eczema. Lime water with milk is very useful. So are well-made broths and beef tea.

Tonics may be necessary to improve the appetite, and other medicines to improve digestion. Steel wine and cod-liver oil are powerful for food, and so, rightly used, is quinine. When there are great restlessness and sleeplessness bromide of potassium is of great service.

Chloral, I fear, is apt to cause itching of the skin in eczematous patients, but it answers sometimes. If oxalate of lime be present in the urine, nitro-muriatic acid and bark are very useful. In some cases syrup of iodide of iron suits well, and may advantageously be alternated with other forms of iron or with the acids. In rickety and badly nourished children attention to the bowels is well repaid. The old-fashioned rhubarb, soda, and grey powder answers admirably.

When the general health appears good a different line of

practice is called for. Here great attention to diet is necessary, error usually lying in the direction of excess, and especially in the matter of nitrogenized food.

Lithates or oxalate of lime in the urine indicate potash or lithia and nitro-muriatic acid. An occasional purge of calomel and jalap, or of sulphur, is very useful. Sometimes nothing answers so well as a combination of Cal. gr. j to iss, with gr. x or more of Sulphur Præcip., and especially if there be bronchial irritation. The exhibition of decoction of hop and *Triticum repens* answers admirably in some cases. Now and then opium and belladonna may be required. It is in this class of cases that the preparations of arsenic yield the best results, that is, in cases of long duration, when there appears to be some constitutional vice at the bottom of the matter, and but little evidence of failure of the general health.

Veiel believes arsenic to be most useful in those skin affections which are accompanied by infiltration of the cutis, such as we have seen occurs in long-standing eczema. When there is any suspicion of a syphilitic taint Donovan's Solution is an excellent remedy. In a few cases of eczema cantharides may be successful, but they require very cautious use and are of restricted application. For my own part I very rarely use them.

Here and there a case will yield readily to antimony, which appears to be indicated in well-nourished and firm-fleshed children, whose skins are harsh.

Local treatment.—Perhaps for no disease of the skin have so many things been devised for external application as for eczema, and the great value of some of them has led to the belief that they alone suffice for its cure. This is the view of Hebra and others of the Continental schools, but it is one to which I cannot subscribe. In my judgment success is best achieved by a judicious combination of both methods, though certainly the resuts of simply local medication are oftentimes very striking, and occasionally I restrict myself to it.

Our first aim as regards local treatment is, in most cases,

to soothe. For this purpose I recommend washing with fine almond or oatmeal and water. Soap, as a rule, is interdicted. Decoction of poppies or marshmallow may sometimes be profitably substituted for water, but the oatmeal should never be cooked. After gentle drying various things may be applied, according to the indications. Thus, if there be much irritation and exudation, dusting with fine oxide of zinc through muslin is very soothing. So is bismuth (the old fashioned trisnitrate). Occasionally the addition of a little tannin to the foregoing or to starch powder is very seviceable. Tannate of glycerine often answers admirably. With many skins greasy things disagree. This may be owing to the decomposition of the fat by the alkaline exudation. Perhaps for all eczematous eruptions nothing equals the white precipitate ointment. It is in my experience an admirable remedy. I think it suits best when the white precipitate is added to benzoated zinc ointment. I have never seen any ill results follow its use, even when applied for prolonged periods. The preparations of tar are at times of striking use, probably they are most useful in chronic cases accompanied by much thickening of the skin. Lotions containing lead will often give satisfaction. They may be combined with morphia or hydrocyanic acid, though usually it is not desirable, nor is it necessary, to resort to these drugs in children's practice. Now and then lotions containing glycerine relieve, but more commonly they cause much pain; this is probably due to the affinity of glycerine for water, which it abstracts from the tissues.

Lotions of carbonate of soda or borax are frequently useful, and a little wine of opium goes well with them. In limited but sharp eczemas a curd made by adding Liq. Plumbi to milk often relieves. So will calomel ointment when the eruption is around the anus. When the hands or eyelids are attacked citrine ointment is useful.

Glycerine of tannin, already mentioned, in some cases acts like a charm, and may be well applied by means of a camel-hair pencil.

It is sometimes necessary to muffle the hands of young

children who suffer with eczema of the face, since by their scratching they greatly aggravate and keep up the disease.

It cannot be doubted that sometimes the recession of eczema is followed by bronchitis, and mothers are occasionally fearful of bad consequences from the cure of the skin affection. In such cases considerable care is requisite, and any tendency to chest complication should, if possible, be warded off by bringing into play another set of emunctories, *e. g.* those of the intestine. It is in cases of this description that antimony is very useful. It is well at the same time to give frequent doses of aperients if the antimony does not act as such, and I have been best pleased with the sulphur and calomel purge, gr. x or more of the former and one or more of the latter.

Impetigo.

This is also a form of dermatitis, and is characterised by the formation of numerous small pustules. The puruloid liquid dries up into yollowish, greenish, or dirty brown crusts, the shrivelling or shrinking of which at times causes great irritation of the skin. The eruption may appear on any part of the body, and in those predisposed to it any scratch, abrasion, or other superficial wound, may take on an impetiginous action. Its favorite seats, however, are the head (where it is almost invariably accompanied by lice), the face (especially about the mouth and chin), and now and then the limbs. It is sometimes seen behind the ears, but not so often as eczema. It frequently exists undetected in the heads of children who are ill-cared for until inflammation and enlargement of the glands of the neck cause the child to complain. Doubtless it has occurred to others, as it has hundreds of times to myself, to have cases of inflammation and abscess of the glandulæ concatenatæ brought for that condition alone, the eruption in the scalp not having been suspected even by the parent.

A search always reveals spots of impetigo, and the heads of such patients are almost invariably very much infested by lice; it is probable that the first step in the production of the

disease is caused by the scratching occasioned by the presence of these insects. When once set up it quickly spreads and is highly contagious. Children who have impetigo are scarcely ever, I am disposed to say never, in good health. It is especially apt to attack the scrofulous, who are of vulnerable constitution. This accounts for and explains one of the most striking features of impetigo, viz. its very pronounced tendency to cause rapid and severe inflammation of the neighbouring lymphatic glands. This is its special characteristic, and is a feature of great clinical significance, enlargement of the glands often leading to the discovery of the hidden eruption, and particularly when the latter is covered with hair.

As has already been stated in the foregoing section, this form of dermatitis is closely allied to eczema, only that the two diseases affect different portions of the skin, while there is a marked difference in the character of their respective exudations and in the tendency to excite glandular inflammation.

It should not be forgotten, however, that as both originate in inflammation of the skin, the two kinds of dermatitis may occur in a more or less mixed form, thus giving rise to what is called "eczema impetiginodes."

It is held by some that the characteristic pustule of impetigo is produced *only* by inflammation of the hair-follicles, a point upon which for the present I prefer to withhold any opinion. But as regards the statement that the vesicles of eczema have no connection with the hair-follicles I am disposed to concur.

Treatment.—No disease of the skin yields more gratifying results than this. The first thing to be aimed at is the improvement of the general health, and as the patients are usually the subjects of scrofulosis and not unfrequently rickety, this is best accomplished by improving the diet, by change of air, and by the exhibition of cod-liver oil and steel wine. Quinine is also extremely useful in this disease. It can readily be added to Vinum Ferri.

Now and then the syrup of iodide of iron suits well, and especially if there be otorrhœa. Attention should also be paid to the bowels.

Locally, as a rule, it is best not to attempt to remove the crusts by poulticing, &c.; they will soon come off under appropriate treatment, and no time is lost or pain caused by attempts at their premature removal. The application of an ointment consisting of ten, fifteen, or twenty grains of white precipitate to an ounce of zinc ointment is attended by brilliant results. The effect of this ointment is very striking. It should be applied twice or even thrice a day. The scalp should always be searched and the hair cut off and from around all suspicious spots.

The skin may be cleansed by oat or almond meal and water (made of the consistence of thin cream without boiling) No danger need be apprehended from the white precipitate. In many hundreds of cases I have never seen any evil results or sign of absorption follow; on the contrary, its use has been attended by the most gratifying results. This preparation of mercury is not readily absorbed from the skin, and, besides, its use is rarely required for more than a very short time. Occasionally, and especially in the presence of pediculi and their nits, the use of an ointment composed of equal parts of white precipitate and sulphur ointment is preferable and answers well.

Certain skin diseases of common occurrence have thus been (it is feared very imperfectly) reviewed from a practical stand point; and the writer hopes the attention kindly bestowed on the reading of this paper may not have been unduly trespassed on or the time wasted. He begs to offer his best thanks for the courtesy shown him.

Dr. Cleveland thought the author had not over-rated the importance of combining constitutional with local treatment in many skin diseases. He had not unfrequently seen in cachectic children ordinary ringworm cured under a course of iron and arsenic, when local remedies alone had proved unsuccessful. He had been led by experience to place a high value on the

treatment of eczema in children as recommended by Erasmus Wilson, viz. the internal administration of iron and arsenic, with an occasional dose of calomel; while the eruption is well covered with benzoated zinc ointment, and in severe cases further protected by cotton wool or flannel. Washing with soap is prohibited, but the occasional use of oatmeal wash allowed.

DECEMBER 3RD, 1873.

EDWARD JOHN TILT, M.D., President, in the Chair.

Present—38 Fellows and two visitors.

Books were presented by Dr. Barnes, Dr. Jacobi, Professor Pari, Professor M. Scibelli, Dr. A. Mattei, Dr. Atkinson, and Dr. T. M. Drysdale; from the Royal Medical and Chirurgical Society, and St. Bartholomew's Hospital.

A special vote of thanks was accorded to Professor Lazarewitch, of Charkoff, for a valuable collection of Gynæcological and Obstetrical Instruments.

The following gentlemen were declared admitted as Fellows of the Society:—Dr. L. E. Desmond (Liverpool), Mr. Marshall Monckton (Hurstpierpoint), Mr. R. H. Moon, Mr. Joseph Smith (Jersey), and Mr. Richard Wilkins (Madras).

The following gentlemen were elected Fellows:—James Johnson Bailey, L.F.P.&.S. Glasg. (Stockport), W. A. Concanon, L.K.Q.C.P.I. (Pill, Somerset), and Robert William Parker, M.R.C.S.

Mr. James E. Gibson (West Cowes), Mr Thomas Rowan (Melbourne), and Dr. Thomas Underhill (West Bromwich), were proposed for election.

Dr. Wynn Williams exhibited a shield for supporting a vulcanite stem pessary in the treatment of anteflexions of the uterus. It was an improvement on the one exhibited to the Society on a previous occasion. The one exhibited on the previous occasion was a short Hodge with Greenhalgh's improvement, having an india-rubber diaphragm filling up the centre, with holes punched in it for the escape of the discharges. This he did not find in severe anteflexions sufficient to retain the stem in its proper position—such was the tendency in the neck of the uterus to return to the old flexed condition, that it would force, in some instances, the stem over the top of the shield. To remedy this, he had made the improvement in the instrument now exhibited (made by Mr. Russell, George Street, and Messrs. Khrone and Sesemann). It consists in the formation of a pouch or socket in the lower part of the shield by punching a round hole in the india-rubber septum and fixing to the edges of it a small pouch, just sufficiently large for the button of the stem to fit into it. It is better to have the circumference of the pouch a degree larger than that of the hole in the india-rubber. The one exhibited, made by Mr. Russell, answers its purpose admirably.

After introducing the stem by means of the stilette, the shield is passed over the handle of the stilette through the hole in the centre of the pouch, and is thus guided to the button of the stem which readily falls into its place and is there retained.

NOTE ON THE REMOVAL OF INTRA-UTERINE TUMOURS.

By Joseph Alfred Tapson.

The difficulties of removing intra-uterine tumours have of late been considerably diminished by the use of the écraseur, and various modifications of this instrument have been suggested to meet the peculiarities of special cases. The following case, however, will, I believe, demonstrate a new mode of meeting a difficulty. A patient of mine suffered for a long time from menorrhagia which I diagnosed to be caused by an intra-uterine growth, but before taking any steps in the matter was asked to consult with an obstetric practitioner of considerable eminence. This gentleman concurred with me both as to its existence and also as to the necessity for its removal. Accordingly, after dilating the os uteri by sponge tents, he proceeded to remove the mass by the écraseur; in this, however, he was foiled, as he could not pass the chain sufficiently high to grasp more than a very small portion of it. This portion was, however, removed, together with smaller portions, by the forceps. The pressure being removed from the os uteri, the hæmorrhage and pain ceased, and for several months my patient was comparatively well. After the lapse of about a year the same symptoms returned, and the hæmorrhage was so excessive that interference was urgently called for. The same gentleman again attempted removal with a like result, followed, however, by a shorter convalescent period, and a third attempt. On the symptoms again returning I was asked to meet Dr. Fred. Bird. I explained to him the former failures; he, however, attempted its removal in the same way, and, as I foretold, failed, and he saw that some other plan must be adopted, and the plan was so successful that I am induced to give an account of it. Through two cannulæ were introduced pliable cutting wires, which were passed high up into the uterine cavity. One cannula being made a fixed point, the other was passed round

the tumour, encircling it in the loop thus formed, the cannulæ were then withdrawn and the wires externally connected with the écraseur, and thus the tumour was cut through at its base, and a mass (of what was afterwards reported to be recurrent fibroid) was removed. The re-growth was, however, rapid and the operation has been repeated, five pounds having been thus taken away. But my object in relating the case is to call attention to what I believe to be a novel, and certainly successful mode of removing intra-uterine tumours.

Dr. Playfair said a similar contrivance had been described by a Dublin obstetrician.

Dr. Potter regretted the absence of Dr. Frederic Bird. He believed that Dr. Bird would, at no distant date, send a short communication to the Society, describing more perfectly the instrument used by him; the short account in the paper did not convey at all an accurate idea of it.

TWO CASES OF EXTRA-UTERINE FŒTATION.

By D. C. MacCallum, M.D.
PROFESSOR OF MIDWIFERY IN MC'GILL UNIVERSITY, AND PHYSICIAN TO THE MONTREAL GENERAL HOSPITAL.

The husband of a lady called on me one day and informed me that his wife was suffering from an attack of indigestion; that she had been seized immediately after dinner with pain in the stomach, and had vomited freely. As his wife had previously suffered from similar attacks, from which she had recovered rapidly, he did not appear to be at all anxious concerning her, and merely requested me to give a prescription. She was then in the fourth month of her pregnancy. I gave a prescription, and requested him to inform me if his wife did not obtain relief.

Having a visit to make at some distance from the city, I was absent for about three hours, and on my return I found a message awaiting me, requesting an immediate visit to the

lady. I obeyed the summons promptly, but, on my arrival at the house, I found my patient dead.

On inquiry, the friends informed me that at first the vomiting had been checked by the remedy prescribed, and that the patient had felt much relieved; but that the vomiting had returned violently about an hour before my arrival, and was followed by severe pain in the abdomen, and a feeling of great faintness; her features became blanched, a cold sweat appeared on her forehead, her countenance rapidly changed, and she told them that she was dying. Her strength rapidly failed, and about fifteen minutes before I reached the house she expired. Although I had not an opportunity of examining her during life, the history of the case, and the appearances which the body presented of death from hæmorrhage, led me at once to affirm that she had probably died from the rupture of the sac of an extra-uterine pregnancy, and my request to be allowed to make a post-mortem examination was at once and freely granted by the family. The examination, which was made on the succeeding day, revealed an immense effusion of blood into the peritoneal sac. As much as two thirds of a bucketful of fluid and coagulated blood was removed. The fœtus was found lying in the abdomen, and connected by a funis with an imperfectly developed placenta. The sac was formed by the structures of the Fallopian tube, near the centre of which the ovum had apparently been arrested. The ovary of the same side contained a corpus luteum. The uterus was increased in size, somewhat flaccid, and its inner surface was covered with a well-marked decidua.

Some time ago I met with what in my opinion was a case of extra-uterine pregnancy, in which rupture of the sac took place at an early period. It might be called a case of pelvic hæmatocele due to that cause. The woman recovered. The facts are as follows:—About 10 o'clock one evening in the month of March, 1868, a gentleman called on me, and urgently requested me to see his wife immediately as she was suffering great pain. On arriving at the house, I found

her in the following condition :—She was lying on her back in bed, with her knees drawn up, her countenance was anxious and expressive of great suffering, her breathing was quick and shallow, and her pulse was somewhat full and rapid. She complained of intense pain in the abdomen, particularly if she made the slightest movement of the body, or if the bed was in the least disturbed. The slightest pressure with the hand over the abdomen caused intense pain, and she could not tolerate even the weight of the bed-clothes. She informed me that she had been sitting quietly in conversation with other members of the family when she felt something suddenly give way in the lower part of the abdomen, accompanied by a sensation as if something had escaped from the womb. This was instantly followed by a pain which was so severe that her husband was obliged to carry her in his arms upstairs to her bedroom. She was then in the second month of her pregnancy.

The symptoms being those of peritonitis, I decided upon applying leeches. I sent for them, but whilst awaiting the return of the messenger, my patient suddenly complained of faintness. Her face at once became pallid and bloodless, her breathing hurried and catching, her sight dim, her extremities cold, and her pulse small and exceedingly rapid. Altogether she presented the appearance of a person in a state of collapse from great hæmorrhage. Bleeding was now out of the question, although she still suffered intense pain. I gave her stimulants cautiously, and prescribed one grain of opium every second hour. She rallied slightly under the use of the stimulants, but I left her with great uncertainty as to whether I would see her alive in the morning. On my next visit at seven o'clock on the following morning, I found to my satisfaction that she had rallied still further, and I decided to apply six leeches, as the pain was quite as intense, and now appeared to be limited to the lower part of the abdomen. The leech bites bled freely into a poultice, and the moderate depletion improved the pulse and moderated the pain. I continued the opium in one-grain doses every two hours, and as her stomach had become irritable, I

ordered half a glassful of iced champagne to be given every third hour. She now complained of a feeling of great weight at the lower part of the abdomen, and there was retention of urine, necessitating the withdrawing of the fluid with a catheter. A vaginal examination revealed a soft swelling at the upper part of the canal; and her linen was stained with blood that had escaped from the vagina. She required most careful watching for a period of two months, and was several times in a most alarming and critical condition, but she at last recovered completely. She had had four children previously. She became again pregnant and was delivered at full term, seventeen months after the attack.

Dr. Edis did not wish to criticise harshly the treatment adopted, but thought it more rational, where the evidence of collapse from internal hæmorrhage was so evident, more especially as there was a history of early pregnancy, to resort to the employment of cold to the abdomen, with pressure in the form of pad and binder, stimulants being only given if absolutely requisite to avert a fatal termination, the employment of opium being rather indicated. He referred to a case, where from the sudden appearance of the symptoms, the rupture of an extra-uterine sac with extensive hæmorrhage internally was prognosticated, and the above treatment proved perfectly successful, although the patient was moribund when first seen, cold, collapsed, with clammy perspiration, pulse imperceptible at the wrist, jactitation, sighing respiration, and other symptoms of impending dissolution. Extreme unction had been administered, the case being regarded as hopeless. The patient is now living and perfectly recovered.

Mr. Scott observed that the two cases just read brought again under the consideration of the Society the question of the propriety of an operation for the relief of the patient, or of leaving the case to run its course. In the first case death resulted from rupture of the sac, caused, no doubt, by the effort of vomiting, an accident which he believed to be always imminent in these cases from the extreme tumidity of the sac in some part or other of its extent. In the second case, although the patient seemed to be *in extremis* from the same cause, rupture of the sac, yet recovery took place. In answer to a question put by Dr. Aveling, he said that in a case of his read before this Society pains first came on at term, subsided for some weeks, and then recurred with such intensity as to necessitate an operation.

ON THE USE OF INTRA-UTERINE STEMS IN UTERINE DISEASE.

By C. H. F. Routh, M.D.,
FELLOW OF UNIVERSITY COLLEGE; SENIOR PHYSICIAN TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN; CONSULTING PHYSICIAN FOR DISEASES OF WOMEN TO THE NORTH LONDON HOSPITAL FOR CONSUMPTION, ETC. ETC.

Intra-uterine pessaries have been much abused, and there is, or rather has been, a strong prejudice against their employment. To this day there is an old school in our profession, honorable by reason of the great names of which it is composed, which would condemn generically all uterine instruments, as it has ovariotomy and other surgical operations. Perhaps in both cases the obvious reason has been the ill-success which attended the early employment of these instruments, in the skilled hands of Simpson and others. But this argument cannot be said to hold now. The same was true for ovariotomy, but now it is a recognised operation, because the several steps to be taken in these cases to insure comparatively a happy termination, before either ignored or imperfectly carried out, are now well understood and as efficiently practised. The subject has also been well ventilated by various writers—Drs. Muir, Meadows, G. Hewitt, Greenhalgh, Wright, Percy Boulton, Bantock, Wynn Williams, Chambers, Savage and others—and the use of such stems can no longer be condemned nor their advantage denied in many cases.

My object is not, however, to refer so much to the skilled experience of others, as simply to give you the results of my own practice, in the hope of creating a useful discussion, and eliciting the opinions of those who are at least as well qualified to express an opinion as I am. In doing this I think I shall best treat the subject by considering, 1st, what are the conditions to be observed to ensure, comparatively, the safe employment of these stems; 2nd, in what diseases

should they be used; and 3rdly, what varieties are most serviceable.

I. Treatment preliminary to their employment.

I do not know that there is necessarily anything not known to you all in this. Dr. Greenhalgh and others of my colleagues have acted on these principles for years back, but their enumeration is a fit introduction to my subject, and their importance cannot be exaggerated.

1st. All inflammatory or congestive symptoms about the uterus or ovaries should be first treated and removed.

Many of the accidents, such as abscesses, metritis, even peritonitis, have been due to a neglect of this precaution. It is well to leech the uterus once or twice, by as many as six leeches, or to scarify freely by some kind of lancet before it is ventured to introduce any uterine stem. If the slightest pain is felt in passing a sound, and especially if this be most marked at the fundus, if, in fact, the disease which I have ventured to describe to this Society, namely, fundal endometritis exists, it is extremely dangerous to use a uterine stem at all. The loss of blood that can be tolerated by a woman under such circumstances (eight to ten ounces), and with apparently no loss of strength, is remarkable. I have frequently taken this quantity with the greatest advantage, perhaps twice at intervals of a week or two, and with the best results. In cases where the uterine pain does not yield readily I have been in the habit of supplementing the local depletion by a large blister applied to the pubic and hypogastric regions. The presence of much hair in these parts renders the use of the liquid blister preferable, as it is important, I think, to come down as near the uterus as we can. The employment of potassa fusa to the cervix is a measure to be adopted to the same end, the sore thus kept up acting as a sort of drain to the uterus and so removing all hyperæmia in the organ. Sometimes the use of the potassa fusa, and subsequently freely scarifying when the slough comes away, is found more effective. In minor cases the use of a daily plug of cotton dipped in glycerine applied to the

cervix, will by the exosmosis produced suffice to relieve the organ.

2nd. It is important in some cases to enlarge the uterine canal. One or more of the above measures are, however, then doubly imperative. The enlargement of the canal may be effected, as is well known in two ways, either by tents, whether of sponge or sea tangle, or by the hysterotome. Even in the use of so simple a remedy as a tent, some remarks may not be here considered unimportant. I would not presume to describe the cases in which they may be used, but I am anxious to point out the necessity of attending to the curve of the uterus, and the amount of dilatation required, as well as the state of the tent employed. In speaking especially of sea-tangle tents I believe sufficient care is not taken in the collection of them. They are picked up indiscriminately by the sea shore and allowed to dry, and then prepared. In most instances no cleansing and disinfecting process is observed. It is forgotten that many of these have undergone a certain amount of decomposition before their selection, and although when dried no offensive smell is observed, once within the uterine cavity, heat and moisture do their work, a process of putrefaction is set up in them, however imperfectly, and pyæmic symptoms and abscesses may result. Then, secondly, the attempt to force within the uterus (which may be either much ante- or retro-flexed), a *straight* tent, such as those which are usually manufactured, necessarily irritates the lining membrane, if it does not do more, or necessitates the pulling down of the uterus which is not always a safe measure. If the sea-tangle tent be not perfectly disinfected in the first place, there is greater tendency to septicæmia. For these reasons (and I believe I have seen evidence of the bad effects of this practice), I prefer as a rule to use my own sea tangles, such as I have been able to collect myself at the sea side, and disinfected. I obtain them thus of all sizes, forms and curves required according to the version, flexion, or straight direction of the uterine canal for which they are intended.

In using one of these I first ascertain by the sound the exact curvature of the uterus, and having selected a piece of tangle adapted to this curvature, I am satisfied with rubbing off by a file all asperities, and then covering the tent with cotton, dipping it subsequently into glycerine first, and the extremity into the Liquor iodi. In this manner, I have first a smooth, secondly a disinfected surface, and thirdly a tent so bent or shaped that it will go in readily and not injure the uterus. I am satisfied that, since I have adopted this plan, I have been very fortunate, and have met with no accidents of any importance, at any rate they have been very few in comparison with my first experience of tents.

Some of the above objections may not apply with the same force to sponge tents. But then sponge tents have not the same power of dilatation, especially in cases of indurated cervices and semi-fibroid uteri. This is especially true I think in regard to the new style of sponge tent made without gum, and forcibly compressed, and so dried before they are outwardly greased. I might say that the facility with which this external lubrication of grease is destroyed where there is any irregularities in the canal of the uterus, or much bleeding or vaginal moisture, leading to their immediate irregular expansion, is an objection; this alone may absolutely prevent their introduction. Again I be-believe in the process of this very excessive compression of the sponge in its preparation, the silicious spicula of the sponge are broken, and so the elastic force of the sponge is much weakened. I have proved this in the following manner. When the grease around one had been injured, I have surrounded the tent by a piece of thin cotton wadding lubricated with glycerine, as I do in cases of sea-tangle; and the next day the sponge tent has come away as inserted, the cotton investment having sufficed to prevent its expansion, which it never does with sea-tangle tents. The usual objection made to the small size of tangles, as compared to the sponge tents, does not really apply. The specimens I now show you, obtained from the Land's End, are quite as

large as could be wished, and I am informed by Dr. Bantock that in certain parts of Scotland they may be obtained of still larger dimensions.

The enlargement of the canal so as to admit a uterine stem may be effected by the hysterotome. In a paper read before the British Medical Association in 1864, "On the use of the hysterotome in uterine disease" (remarks which have been fully confirmed by the experience of other writers, notably Dr. Skinner, of Liverpool, and my colleague Dr. Percy Boulton, of London), I fully discussed this question and its advantages. I am, nevertheless, aware that of late some members of the profession have inveighed against the use of the instrument, and one or two have met with unfortunate if not fatal results. I do not profess to be in any way more skilful than others. Perhaps the reverse would be true, but I must confess I have heard of equally sad and fatal results where only sponge tents were employed. Since August, 1872, in my hospital practice among the inmates, I employed the hysterotome in 38 cases—fibroids, congestions, dysmenorrhœa cases, &c. In twelve the patients were relieved, in several of these very much so; in twenty-two they were cured; two left the hospital convalescent, but might be said to be cured also. Some uterine pain, and some few times a slight feverish attack, supervened, but nothing more.

Many of these cases had been under treatment in other hospitals, or attended at their own homes. Several of these have been seen from time to time and have had children since. My colleague, Dr. Rogers, I believe, has had similar experience, so that I cannot look upon the practice unfavorably.

I have found that in these cases rest and warmth, especially for a week or ten days after, are necessary. The bleeding which sometimes occurs in these cases is considerable, but this very bleeding, if carefully watched, and not allowed to go too far, is profitable to the patient. I have of course had secondary hæmorrhage in a few cases, and in

two I was made somewhat anxious by its extent. But in one case it was wholly due to the nurse's inattention, in the other, to the patient's own wayward conduct and to her forcibly removing several of the plugs and the T-bandage.

After having cut the uterus open with the hysterotome, in most cases I plug the cut uterus with a small sea tangle prepared as before directed, covered with cotton dipped in glycerine, and the tapering point of it for about half an inch or a quarter of an inch in Liquor iodi. When this is kept *in sitû* by plugs and a tight T-bandage, the fear of hæmorrhage is reduced to a minimum.

Experience, however, has satisfied me that in some cases all measures of dilatation, or even the use of the hysterotome fails permanently to keep the os uteri sufficiently patent unless a portion of the cervix, say from the eighth to the sixth of an inch, on each side, is cut through into the vagina, as done chiefly by Dr. Barnes.

I should add that my experience on the immediate dilatation of the uterus by instruments devised for that purpose, or by other analogous means, is very limited. In my first trials I was unfortunate, and in all, the results obtained were not permanent. The pain induced was also an objection.

II. The uses of uterine stems, and the varieties to be employed, will be best brought out by a consideration of the cases in which I venture to recommend their employment. I must here very decidedly guard myself against the imputation that I use them indiscriminately, or even frequently. They are rather to be regarded in many cases as a *pis-aller* after all other means have failed, and because they have failed. They are by no means always safe of application. Then, again, to mention every kind of case in which they have been used, and the relative advantage of each variety of stem in these diseases, would be both unprofitable and tedious; I can only lay down general principles, and specify a few of the diseases in which I venture to recommend their use. Besides, I have alluded to several of these in previous essays, notably in my paper on uterine

deviations. The chart I now show will give some idea of their variety and number.

There are four classes of cases in which the intra-uterine pessary should be employed :—

1st. In cases of membranous cervix.

2nd. In certain cases of amenorrhœa.

3rd. In certain cases of dysmenorrhæa, whether mechanical or simply neuralgic.

4th. In uterine flexions.

I am not aware that the first class of cases mentioned has ever been specially described. I have met with several examples of this variety. My experience of such is best given by quoting a case :—

Mrs. S—, æt. 33, consulted me for a stoppage of the menses. She had been married several years and had had no children. There had been more or less dysmenorrhœa during her married life, and the flow of menses had gradually diminished till it had stopped altogether. There was occasional molimen, probably, at intervals, and leucorrhœa. There was no reason to suspect in this case anything like ovarian inactivity. She was well developed in every way, and equally well matured in her experiences. Moreover an heir to her property was her chief desire. On examination I found a membranous cervix, on a level with the vagina, a small dimple denoting the locality of the os, but through which no sound could be introduced. With difficulty I succeeded in passing a stilette, and then put in a fine piece of sea tangle. Then only did I find that I had to deal with a properly formed uterine cavity, and of normal length. In this case, however, no sooner were the attempts made to keep the cavity open by sea tangles desisted from, than it would again contract. The patient, however, left me for two months, during which period she menstruated regularly. The third month the dysmenorrhœa recurred, and when I saw her again the passage had contracted, so that an ordinary sound could not be passed. I now dilated again and then cut the cervix with the hysterotome. The parts having in due time healed she was ordered to wear an ordinary intra-

uterine silver stem. This remained in some months, during which period she menstruated regularly. Then she felt as if the instrument had moved and she came to me. I found that it had made its way into the vagina. But she could not then submit to treatment, owing to pressing engagements, and did not return. The last I heard of her was that she was pretty well in health, but in other respects much in the same condition as when she first consulted me.

This case, unsatisfactory as it was, proved to me two things:—1st. That a membranous uterus has always a strong tendency to contract; and 2nd, that as in such cases no cut can be made of the cervix outwards in the vagina, nothing short of an intra-uterine pessary will suffice to keep the canal pervious, and that this must be worn for months.

The following case proved more satisfactory to me.

Mrs. W—, then a patient of a member of our profession who was too ill to attend her, was referred by him to me. I found the patient had scarcely menstruated at all, then always with great pain, and only a few drops. She was a well-formed woman, with large mammæ, well-developed pubes, and, as I subsequently learnt, strong sexual feelings. When the menses did appear there was intense pain, and she became almost temporarily insane, maltreating her husband seriously. This brain excitement, which was invariably manifested by acts of unkindness to her husband, was always preceded by a sharp attack of nymphomania, of two or three hours' duration.

An examination revealed a remarkable state of things. The vagina was very short, about four inches long, and no distinct cervix could be detected. Nor did it feel hard, as is usual when the finger abuts upon a cervix. I satisfied myself, however, of the existence of a uterus, of all but normal size, by examination per anum. There was apparently no os uteri but a mere dimple, through which no sound could be introduced. With considerable difficulty I introduced a silver stilette without a head, which

penetrated about two and a quarter inches in a direction downwards and backwards.

The case was thus demonstrated to be one of short vagina, a retroverted uterus, and general constriction of its canal. The parties had been married several years. There had been no children born, nor had there even been a miscarriage, and the examination of the lady at once explained the reason.

My first measure was to dilate by a very small stilette-shaped piece of sea tangle tent; the next day a larger piece was inserted, and so on, till I managed to dilate it to the extent of admitting my finger. I found nothing unusual in the organ, except, as before stated; it was about a quarter of an inch shorter than normal and retroverted. The difficulty in this case was, however, in no way overcome. The tendency to contract was great. I cut it on each side, and touched the parts consecutively for days with tincture of iodine, but the parts healed rapidly, and the reclosure of the os progressed. I now introduced one of my dilating pessaries, which was retained nicely and without pain. So long as this remained, the catamenia appeared regularly and in larger quantity. But no sooner was it removed than in about a week the parts had so contracted that it became obvious in a few days it would contract to its original state. To use the hysterotome and cut in the usual way did not appear desirable, as the whole of the cervix was above the vagina, and the second step of the operation, cutting right through the cervix (the quarter of an inch of it as before stated), right into the vagina to assure the success of the operation, was (for the same reason, that no part of the cervix projected into the vagina) impossible. I therefore adopted the remaining alternative. I dilated the uterus again and introduced the pessary I now show you. This was borne well, in no way interfering with her conjugal relations, and what is more, the catamenia came on regularly. At the end of six months she returned to me. The instrument having remained *in situ*, and the catamenia having been regular, I removed the former. The opening now in utero was large enough to admit the little finger. It even now

showed a tendency to contract at the end of every week or so, but the mere passage of the apex of the index finger sufficed to overcome this tendency. This was done every second day, and from the last accounts I heard, the contraction of the os had not again recurred.

2. A second class of cases in which I think the use of these stems is useful, is that in which amenorrhœa, or insufficient or imperfect menstruation, has long persisted. I do not, of course, allude here to cases of simple amenorrhœa due to anæmia. But we have all met cases in which an apparently well-formed, and it may even be a hyperæmic, girl labours under a stoppage of the courses, and has done so for years. Iron, aloetics, and the usual emmenagogue remedies have been used with little or no benefit. I have seen the disease in unmarried girls whose mammæ and feelings admitted no doubt of the integrity of their ovaries; also in married women where the function had ceased gradually or suddenly at an early age, and I suspect that not a few of those cases in which the function is supposed to have ceased early, are really cases in which the disease in question existed, and where had a uterine stem been worn, the function would have been re-established, and the woman perhaps become a joyful mother of children. In some of these cases an occasional white discharge or molimen only is secreted. In a few the secretion becomes vicarious, recurring as hæmoptysis or epistaxis, which might, I have no doubt, be directed to its proper channel and characters by the use of an intra-uterine stem. These are precisely the cases in which Sir J. Simpson used to employ pessaries made of zinc and copper to set up a magnetic action, and to provoke a catamenial flow. It cannot be denied such stems are often very useful. But there are some objections to their use. They occasionally produce great pain. As usually made they are too long; then they frequently fall out by reason of their weight, and often, after retention for three or four weeks, the zinc is gradually worn out by chemical action, the stem becomes jagged, and produces a great deal of irritation.

As in the former class, my meaning will be made more clear by citing a case.

Emma C—, æt. 45, came under my care April 1st, 1871, at the Samaritan Hospital. Had had amenorrhœa for four years complete; last Sunday, had appearance of a little show, nothing more. Had a good deal of pain low down in front, with a general bearing-down sensation. About a week ago I saw her, and found the os obstructed. This obstruction was after a time overcome, giving exit to about an ounce of treacly retained menses. Had generally suffered from leucorrhœa.

Examination.—Uterus heavy, large, not very painful to touch, movable. Sound obstructed at internal os, which is passed with difficulty although there is no flexion. Uterus of normal length.

Treatment.—The patient having been freely purged, on the 9th the hysterotome was used, and the stricture cut through. There was some bleeding. Plugged with cotton. The plugs were removed on the 11th, and on the 12th I introduced one of my diverging stems. On the 14th there was no uneasiness. On examination no warmth of vagina, but the bowels were clogged with fæces. Appropriate remedies having been adopted, she gradually improved and left the hospital, feeling very comfortable, with the instrument in utero, on April 19th.

I saw this patient at my own house on Oct. 21st. The stem was in position and produced no discomfort. Six weeks ago there had been some pain, but she went into the country, and now feels quite well.

Nov. 13th.—Last week catamenia came on with very great pain, and were very sparing in quantity. The pain was, however, chiefly over the ovary. On examination, the uterus was found quite movable, and could be danced upon the finger without any pain. No tenderness over ovary. Instrument *in situ.* She was given a calomel purge with morphine. Ordered iron and belladonna with pennyroyal water three times a day.

March 30th, 1872.—Stem still *in situ,* gives no pain.

Has been five times unwell since the operation. Last time passed a large clot. Has not felt so well for years, is looking fat and much younger. Complains only of a little sore throat which is relaxed, and for which she was ordered a little tannin.

July 23rd.—Instrument still very comfortable and *in situ*. Unwell twelve times after operation. Last twice fluid more pale, like coloured water. Feels rheumatic, with pains all over the body, and has been hard at work lately. Ordered a rheumatic mixture.

April 10th, 1873.—No change as regards instrument. There was a slight period a day or two ago with a little pain. She is at present hard worked and feels rather weak. Ordered iron and aloes.

June 1st.—Feels very comfortable. Regularly unwell and without pain. Period lasts about a week.

Nov. 3rd.—Catamenial periods regular. Colour quite natural. Instrument *in situ*. Never felt better.

This case, which may very well be taken as a type of amenorrhœa due to want of proper stimulus of the lining membrane of the uterus, proved in every way satisfactory. She has now worn the instrument since the 12th of April, 1871; *i. e.* two years and nearly seven months, and without inconvenience.

I have not used the stem in cases of vicarious menstruation, or where only a white secretion, spite of emmenagogues persist, but from my success of its use in cases like the preceding, I should not hesitate to do so, if such cases presented themselves.

3.—*In cases of dysmenorrhœa.*—I am aware that it is among this class that I may expect the greatest number of objections. Obstetricians do not appear to be agreed as to the seat of dysmenorrhœa, whether the ovary or Fallopian tube, the internal or external os uteri, or whether it be due to simple versions or flexions of the organ. The curious circumstance is, that men of large experience hold the most opposite and exclusive opinions upon these several causes. For my part I must, from my own experience, admit the

existence of all five. Those cases where it depends on ovarian or tubal irritation, however, form no part of our present subject. The remaining three do. As, however the examples of displacements involve other complications in their origin and progress, they are best treated of as a special class. It is more convenient in other words to treat under the present class cases of obstruction in the canal only and especially those at the internal and external os uteri.

But even in this subdivision it becomes important to distinguish two classes of cases; (A) those in which the mechanical element predominates and (B) those in which the neuralgic element is in the ascendant; and, as before, I shall illustrate my meaning by two cases.

A. Where the mechanical element predominates.

Mrs. T. J—, married for four years, never had a child or mishap. Regular every month, but very little each time. Period lasts four days, and is generally earlier by two or three days than it should be. About six hours before the period comes on she suffers a good deal, the pain lasting twenty-four hours after it has come on. When a full discharge occurs, pain is at once relieved. She had an ulcerated womb some time back (sixteen or eighteen months ago), for which she was attended by an eminent London accoucheur and cured. The doctor stated it had existed a year at least previous to his seeing her. She has leucorrhœa now, which soils her napkins yellow. The least cold increases this and produces uterine pain. Occasionally she has sharp bearing-down pains, but none now. Expects the catamenia in a day or two.

Examination.—Uterus high up, slightly anteverted as in barren women. Sound obstructed one inch up and followed by blood. Organ heavy, congested. No ulceration.

Six leeches were applied to the womb, and a soothing mixture was given to relieve the dysmenorrhœa during the period itself. At a later period I opened the os freely with the hysterotome, and plugged with the sea tangle, as the hæmorrhage was large. In the course of this case I met with

several drawbacks. My patient was a spoilt child, could not endure pain and was not one of the sweetest of tempers. On the second day she removed the plugs forcibly and brought on furious bleeding, which was with difficulty controlled. Later on she had obstruction of the bowels from the descent of hardened fæces, and for a long time she refused to take an injection. She did have one at last. The uterine wound healed favorably, and at the end of the fortnight I introduced one of Greenhalgh's uterine pessaries. All anteversion had passed away. She bore the pessary well, it gave rise only to some colicky uterine pains. The next period passed away quietly. The only symptom during this convalescence which was not due to her own indiscretion was a copious flow of leucorrhœa, which was occasionally offensive, but which yielded at once to Condy's fluid. Except the recurrence of this offensive discharge, and some bearing down, which was again due to her own carelessness and a very long walk she undertook, no other symptoms occurred in the progress of her case calling for comment. Four months after the operation I heard from her husband. The letter was full of thanks, acquainting me of her well-being and the cessation of all dysmenorrhœa.

I may remark that I do not think in this case the hæmorrhage induced by her peevishness was injurious in the long run. On the contrary it relieved her of all congestion.

B. The second case is one of dysmenorrhœa where the nervous element predominated.

F. M—, æt. 25, was a highly sensitive and intellectual young lady. She was plump and in good condition, her complexion was rather muddy and she had suffered a good deal from acne. She had such great pain internally at the menstrual periods, that she was obliged to take to her bed. There was first agonizing pain in the back, beginning low down, but extending high up to the dorsum. Then the spinal tenderness in the dorsal region was excessive at all times; she could not bear to be touched even with a stream of water, as it induced much pain.

During the periods, however, the spinal tenderness was perfectly terrible, there was sickness and vomiting, with rigors, and forcing uterine pains, and she frequently fainted. About the third or fourth day these symptoms subsided in measure, and the flow became more copious, but from the beginning of the period till the end, about nine days, the pains were as described.

On proceeding to make an examination I found the hymen intact, vagina normal, uterus in normal position, if anything a little anteverted, high up. The examination induced a good deal of pain, especially externally, but pressure on the sacrum from within induced great pain. On passing the sound the moment the internal os was reached, there was obstruction and intense pain and shivering, and although I overcame the obstruction by a little management, and although it was not increased by pressure against the fundus, still so long as the sound remained in the internal os, all the symptoms, and in the same localities, with the sickness and pain, exactly as when she was menstruating, recurred. They continued for an hour after, and were only relieved by a full dose of morphine subcutaneously injected.

The friends objecting to the use of the hysterotome I was obliged to relieve the uterus by aperients, and leeches to the anus, and after a few days I proceeded cautiously to dilate the hymen with a sea tangle; the patient bore the introduction of this pretty well, but the pain soon recurred and was only quieted by a repetition of subcutaneous injection of morphine. The next day I introduced a small sponge tent into the uterus. The third day, my patient being placed under chloroform, I introduced one of Greenhalgh's elastic intra-uterine stems. The pains were very severe for several days after, and exactly resembled those of a period in their intensity. Sickness also supervened. But she managed to keep down the raw beef tea; the pulse did not exceed 96, only once or twice it rose to 108. Vagina was cool. Temperature 99° F. —100° F. There were several times imperfect rigors, but they were only similar to those which occurred when she was unwell.

On the fourth day, however, there was such an exacerbation of pain and weakness that it became a question whether it was safe to keep it in. A consultation was therefore held with an eminent member of the profession, and weighing all points, and the necessity of using the hysterotome at some future period, should the stem be now withdrawn, and as there was no actual heat or tenderness of the uterus, and as the pains were chiefly reflected, it was decided to keep down the pains by morphine, and to leave the stem in. The event justified this decision. The symptoms gradually subsided. The periods became less and less painful, and now they pass away with little, if any, inconvenience. She is looking fat and plump. The countenance is clear and fresh, and she is not conscious that the instrument is in her. This is about four months after its insertion.

This case is only a type of a variety of disease not usually insisted upon. Dr. Chambers, in his late papers on the use of the intra-uterine stem in cases of flexions, alludes to one. But the last example I have given was not a case of flexion at all. What anteversion existed was that which is normally found in the unimpregnated female. A similar case I had some time back in my hospital practice, a case which for seven years had suffered from intense dysmenorrhœa. She had consulted, besides myself, several other medical men, but all had failed to give her relief. I had done everything that could be suggested to overcome the intense pain from which she suffered at the *internal* os. The pain appeared to be restricted here. It did not extend to the fundus, or cervix, but so soon as the sound reached the internal os the pain became excruciating, and was reflected in the back, and in the abdomen and belly, produced sickness, &c. I had tried tents, but these produced pain and feverish excitement only. I used the hysterotome under chloroform. I used leeches, blisters to hypogastrium and sacrum, even potassa fusa to the painful os. No permanent relief followed these measures. Subcutaneous injection brought on sickness and fainting. The only thing which did seem to relieve her was the introduction into the

uterus of the Lint. aconiti, either with a sound, or on a piece of wire covered with cotton left in utero for a few hours, and kept *in situ* by a plug of cotton dipped in the same liniment. I also made her use as an injection an ounce of the aconite liniment to two pints of water. But this treatment had to be constantly renewed. Only lately have I succeeded in giving her something like what appears permanent relief by the introduction of one of Greenhalgh's intra-uterine elastic pessaries. It gave rise at first to great pains, and anodynes very freely given and perfect quiet were needful for fully a fortnight before positive relief was obtained.

4. The last class of cases to which I wish to call attention is that of flexions.

I have said and written so much upon the etiology and progress of such cases if unaided that I shall not again refer to these points except incidentally and where necessary to make my meaning obvious. I shall, however, give a case, as before, to illustrate my meaning.

Mrs. B. H— had been suffering for years from nervous symptoms, backache, bearing down, and great difficulty of walking. The backache was so excessive at times as to compel her to lie down. She was the mother of three healthy children. Occasionally she would suffer from headache which would last for three days at a time. She was regular, and in sufficient quantity. An examination revealed the existence of fundal endometritis and retroflexion. The uterus was heavy, not very movable, congested. There was also extensive ulceration.

Measures were taken to relieve the congestion. Small doses of bichloride of mercury were given, and local scarification and leeching practised; under these measures she greatly improved, and was able in some degree to resume walking exercise and her household duties. But the backache persisted. The uterus was now reduced and a Hodge's pessary inserted within the vagina.

She continued in a fair condition for a year, when she went to the country, and there apparently caught a chill,

which was followed by a rheumatic seizure. When this got well, the backache seemed to increase. Her husband falling ill at the time, all treatment had to be suspended. She removed the Hodge, and became very weak. The ulceration and fundal endometritis recurred, finally she became insane. It was several months before she recovered her reason, and then she came again under my care for her uterine disease, to which I had attributed, in the main, her maniacal attack.

There was at this time a heavy uterus, a copious yellow discharge, extensive ulceration and subjacent induration of the cervix, a good deal of uterine pain, especially at night, or after exertion, and backache. The organ was of normal length but completely retroflexed and congested. The patient herself was very weak and emaciated, so that I did not dare to try localdepletion by leeches or the lancet. But I burnt the os twice with Potassa cum Calce, and very freely each time, waiting till the slough produced had come away. In about four weeks the uterus was much lighter; there was less pain in the recumbent position, but it was at once produced by walking or sitting up. I waited till the ulcer produced by the potassa fusa had healed. I then introduced one of Dr. Greenhalgh's pessaries (intra-uterine), and within this a spiral wire fitted to the pessary. This was introduced as such upon a bent stilette in the retroverted direction. With this reduction all her symptoms as by magic disappeared. She was able to stand up without pain, and the very next day to take a walk. The instrument remained in rather over three weeks, and then fell out; the patient continued much better. The womb is now in place and neither congested nor ulcerated. The backache is not felt except at the periods; in fact, she feels better than she has for years.

Whether the case, however, be one of retroflexion or anteflexion, if the flexion be very acute and of long duration, as this case proves, the mere employment of a Hodge's pessary is insufficient. We have all, doubtless, seen cases, in which, after all necessary preparations by depletive local

measures, the symptoms in lieu of being diminished in intensity have really been aggravated. The Hodge only presses upon the fundus, and increases the mischief. In not a few cases also, the pressure made upon the rectum by the long-continued retroflexion has produced much mischief in that intestine. It is much congested, and piles are present, with or without ulceration. The introduction of a Hodge in such cases only augments the stagnation or obstruction in the vessels of the rectum. I have known two cases in which, owing to the coexistence of rectal disease, and as a result of long-continued ulceration there, a small fistulous opening between vagina and rectum (possibly not larger than a pin hole, and known only by the occasional passage of flatus in the vagina, or transmission of coloured fluids purposely introduced) was detectable, and where no operation undertaken to close it had permanently succeeded. In both these cases when I applied a Hodge's pessary to support the retroflexed uterus, the congestion of the rectum was so increased and the pain so intensified, that it had to be removed. In such cases the use of an intra-uterine stem alone offers any hope of recovery.

It is a peculiarity in the introduction of intra-uterine stems that they produce at first copious uterine leucorrhœa and sometimes menorrhagia. If good local depletion has preceded their employment, the menorrhagia is but of short duration. Indeed it is upon this very effect that the instrument proves of so much advantage in cases of amenorrhea, as before seen. But whether it be uterine leucorrhœa or menorrhagia, both results are salutary in their effects. The uterus is thus relieved of all remains of congestion, and unless there is evidence of its inducing great debility I never think of stopping it.

Where uterine leucorrhœa is present and the patient careless, it is very apt to become offensive. There are two reasons for this. One is that the india-rubber piece at the bottom is too large, or, where a solid pessary is used, the inferior extremity is too widely extended, so that between its inner surface and the cervix, secretion accu-

mulates, and by its rapid decomposition irritates the outer mucous surface of the cervix uteri; and secondly, this irritation soon produces an ulceration, and thus the evil is increased. To remedy this, frequent washings are needed, at least night and morning. These must be free, and the injections copious. No wonder then that patients get tired of their use, and employ them irregularly. For obvious reasons this is especially the case in winter. Besides, some women, and this is mostly true in the better classes, have very weak hands and wrists, and they soon get tired of using a Higginson's or other analogous syringe. A passive douche meets this difficulty, and is therefore preferable.*

It remains only for me to state generally what are the conditions necessary to the formation of an intra-uterine stem, so that it may be comfortably worn, and then, secondly, to point out the peculiar varieties I venture to recommend for future use.

1. Conditions as to formation, shape, &c.

A. It is a rule with me in all these cases without exception, except where the uterus is unnaturally prolonged, never to use an intra-uterine stem over two inches long. I have already insisted upon the necessity of this caution in my paper on uterine deviations. To irritate the *fundus*

* N.B.—A portable douche has been made by Mr. Russell, of George Street, Portman Square, for such weak-handed ladies. It consists of an ordinary zinc bucket, to the inferior part of which is fixed a tap. To this last is a long piece of caoutchouc tubing seven or eight feet long, or even more, to the distal extremity of which is a second tap. To the other end of this tap is affixed another piece of tubing, terminating by a female enema pipe; this bucket is filled with water, the lower tap being closed. It is then put upon a high chest of drawers, or pulled up to the ceiling by a rope and pulley and there fixed. The lady is now seated on an ordinary bidet, the pipe introduced into her vagina, the tap opened, and the water rushes down with force and carries away all impurities, the lady being merely a passive agent. I have had these buckets made like india-rubber bags, although I believe this was an original suggestion of Dr. Drew's. The latter is more portable, and has the advantage that it may be used as a warm water bottle also, or a pillow if so required; but the former may be used by ladies in travelling as a bonnet box.

uteri is always dangerous. Besides it is not necessary. The flexion begins generally at the internal os, and two inches is sure to pass this point.

B. The omni-lateral movement of the uterus upon itself, certainly upon the vagina and its own ligaments, must not be prevented, and this holds especially true in the case of flexions. This was the chief disadvantage of Dr. Simpson's original instrument.

C. The very shape of the uterine cavity points out that the pessary is best supported by some bicornite arrangement superiorly, so as to be kept *in situ* and not fall out.

D. The stem, especially inferiorly, should not be too narrow. In cases of dysmenorrhœa, which are often also cases of sterility, a larger opening to favour impregnation is the indication in the treatment. Where an elastic stem is used it may be, by being stretched over a sound, considerably narrowed while being introduced. When the sound is withdrawn it is thus capable of expansion; and experience shows it does this with very little discomfort, if any, to the patient.

E. The stem should be very light, and, as far as possible, non-corrosive.

2. Varieties of pessaries. It would be altogether presumptuous in me to describe all the varieties of intra-uterine stems which have been devised, or to indicate the relative value of each invention. Every man brings his own especial skill and ideas to the use of his own instrument, and each may therefore perfectly succeed in his own way.

It may, however, be well for the sake of convenience to group several of the pessaries, and so bring out more accurately their several advantages or the reverse. I think they may be included in seven principal groups.

(1) Those which immovably fix the uterus in the centre of the pelvis, and at a given point at the top of the vagina. Such are Sir J. Simpson's large stems, one part of which occupies the cavity of the uterus, and to which is added a long vaginal piece, which may or may not be elongated, and

then turns round and is fixed by a dilated portion over the pubes. To the principal objection I have already incidentally alluded. Every shock to the body is thus conveyed to the uterus, and no doubt this cause alone has been very operative for evil in some of those cases in which it has been known to have done much harm. Another objection is that it effectually stops all conjugal relations. Lastly, all resilient action of the uterus upon itself is completely prevented.

(2) Cylindrical stems which tend either to dilate the canal, or keep it straight, but without any other "*point d'appui,*" except such as is afforded by the disk inferiorly; and among these we have no end of varieties, some *metallic*, with holes to allow the escape of discharge, some made of *gutta percha*, some of *ebonite*, some of *glass* (Dr. Meadows); some of *caoutchouc* simply, some straight, some curved, some with a knob half way up the metallic dilatation (Dr. Muir). Some, again, are made of more than one metal to ensure the magnetic action before referred to. Besides the special objection referred to in a former part of the paper to this last variety, all these varieties (except in cases of anteversion and where the uterus is kept at almost right angles with the vagina) will very frequently fall out by their own weight on any exertion being made, even while dancing, walking, riding, &c. Besides the very pressure in utero of a stem often provokes expulsive pains and so the stem may be forcibly expelled. Lastly, the elastic resiliency of the uterus upon itself is altogether prevented by them.

(3) To meet the objection of want of support inferiorly, there are two inventions; one, where a straight ebonite stem is attached to a Hodge's pessary superiorly, moving on a joint in this upper part from before backwards. The other is Dr. Wynn Williams' invention. A very small Hodge is filled in by a caoutchouc diaphragm, perforated by holes, but in the centre there is a depression in which the disk of the stem fits. This depression being a little tighter superiorly than inferiorly keeps the attachment between disk and

support permanent as long as required, and precludes, as in the previous case, all chance of its falling out. The first of these inventions allows the uterus in addition to be kept up, in cases where it descends too low, but this end is also attained by Dr. Williams, who sometimes uses a longer support to answer also the purpose of a Hodge. The only objection to these two stems is that the resiliency of the uterus upon itself is prevented, but as neither impede conjugal relations they offer many advantages. Only in cases where a rectal disease exists synchronously are they contra-indicated.

(4) Divaricating stems. It was chiefly I imagine owing to the frequency with which the stems usually employed fell out that divaricating stems were first invented by Dr. Graham Weir, of Edinburgh, in 1855. Moreover, except where either of the two last-named vaginal supports were employed it was noticed that the piece of cotton introduced as a plug to keep the stem from falling out was a nuisance. It had to be frequently changed, besides it produced a bad smell if kept in too long, or not duly covered with glycerine. This was an objection which in practice could not be long resisted. Divaricating stems by their very form would be easily retained in utero, if borne at all, and so the event proved. To Dr. Greenhalgh, of London, is due the chief merit of their introduction into this city. His instrument, introduced in 1864, was subsequently modified by Dr. Aveling and Dr. Wright in 1866. Since that period a number of other modifications have been made in their form by myself, Drs. Bantock, Percy Boulton, Chambers, and others. I think the peculiar curve I have given to the wings is more in keeping with the anatomical shape of the uterus. Ebonite, however, does not always keep its elasticity in warmth, as metals do. So far Dr. Bantock's modification, where he uses metallic wings, is an advantage. On the other hand the latter are more corrosive, and I have known of two examples where metallic wings have so corroded as to break *in utero* and produce considerable mischief.

The length and lightness of the late Dr. Henry Wright's instrument, the use of which has been lately so successfully revived by Dr. Chambers, point it out as among the best of these instruments. The chief objection is its expense.

(5) To all the above-named varieties one fault applies. The natural resilient elasticity of the uterus upon itself is prevented. Again, except in the first variety mentioned, and in the third, if the uterus has a tendency to descend too low, no support is given to it. This last is in fact one of the desiderata effected by an ordinary Hodge's pessary in flexion cases. To remedy this inconvenience I very early adopted one with a long vaginal piece. This I described in my published lectures in 1862, although of course I had used it with advantage some years before. It is, however, not always practicable to use it except in virgins; the objection to using it in married women is that it interferes with conjugal relations, and the obligation to wear constantly a T-bandage to keep it *in situ* is a serious objection. This, however, was among the earliest wire-coil pessaries introduced. Dr. Aveling also introduced one. Mine consisted of a small circular coiled spring, two inches long, separated from a larger coiled spring by a disk, but the cavities of both communicating, so that by a stilette it could be introduced curved into a flexed uterus, the whole being covered by caoutchouc. Dr. Aveling's consisted of the smaller coiled spring and disk only and was uncovered by caoutchouc. The objections to this last, save only that it did not interfere with the resilient elasticity of the uterus upon itself, are the same as those made to the second class of instruments mentioned. Unless covered by silver or copper plating I fear it would readily corrode. But if so prepared, and supported as the third group mentioned, it offers marked advantages.

(6) Caoutchouc stems. The invention of these for uterine purposes is due to Dr. Greenhalgh. As seen, from the cases mentioned, they are of signal advantage, and may be worn where others cannot be tolerated. The horns of these stems are said sometimes to provoke too much menor-

rhagia, and hence Dr. Squarey's modification of a dilated perforated or slit bulbous enlargement superiorly in the place of the horns. Of this instrument I have no present experience, but I can quite see that it promises equally well with Dr. Greenhalgh's.

(7) The last variety of stem which I shall mention is the combination of caoutchouc and coiled wire. No doubt in theory it promises better, perhaps, than any of the others. One sufficiently light is still a desideratum. But with this exception every indication required is fulfilled in them. The caoutchouc stem is first introduced and then the coil, and it can be kept *in situ*, either by the prolonged sides of the disk of the coil fitting into two slits in the caoutchouc disk, or by one of Dr. Williams' supports.

Dr. Heywood Smith said that those Fellows who held that it was not good practice to interfere with an inflamed or even congested uterus without first lessening such congestion, must have been very glad when Dr. Routh urged so strongly the necessity for local depletion before resorting to any operation for the dilatation of the cervix uteri. With regard to division of the cervix uteri, Dr. Routh had omitted to mention whether he preferred the single or double-bladed hysterotome. For his part, though the hysterotome was serviceable in some cases he (Dr. Heywood Smith) preferred incising with a nearly straight knife per speculum, as then the exact line of the incision could be seen, and the knife carefully passed into the canal in the direction first of all ascertained by a straight sound well guided through the felt fibres of the internal os. With regard to what had been said about the introduction of sponge tents immediately after incision, he thought the proceeding a dangerous one, and tending to septicæmia; he considered the better plan was to wait for the cut edges of the incision to heal before the introduction of any tent.

Dr. Squire remarked, that the opinion just expressed (by Dr. Smith) seemed to lend support to that part of Dr. Routh's paper, which appeared to him to be least defensible. If all the treatment described be really required, merely with the object of introducing an intra-uterine stem, surely a prior question arises whether that operation should not be delayed until relief had been obtained by means less severe than the scarification and use of caustic detailed this evening in the paper that had been read.

Dr. Chambers said: "During the last ten or twelve years I

have seen and treated a goodly number of uterine flexions, and am pretty well acquainted with the different forms of treatment which have been from time to time suggested. I am, personally, much indebted to Dr. Routh for his very able paper of this evening. His successes differ but little from my own, however, although I have never thought it necessary to adopt the prolonged preliminary treatment upon which he so strongly insists. When I was a student, a distinguished surgeon always inculcated the following as a general principle, "Whenever you meet with a dislocation reduce it at once, with all possible care, excepting in cases, which are rare, where there are obvious reasons to the contrary." Upon this principle I have always acted in the treatment of uterine flexions, supplementing the replacement and introduction of the intra-uterine stem with such treatment as the nature of the case indicated, whether by leeches or otherwise; and I can honestly say that this course is not only a safe one, but has, in my hands, been followed by results most satisfactory, both to myself and the patients so treated. (A detailed account of several such cases will be found in the early numbers of the 'Obstetrical Journal,' 1873.) I think it a very dangerous procedure for a physician to introduce the intra-uterine stem, either in his consulting-room or in the outdoor department of an hospital, and then to send the patient home. I was once unwise enough to commit this foolish act some years ago, but the lessons then taught were such as effectually to deter me from ever again committing such an indiscretion. I almost invariably introduce the stem while the patient is under chloroform, and then keep her perfectly at rest *in bed* for at least a week or ten days until the uterus has become accustomed to the presence of the stem. If in the course of a week or ten days no irritation is set up and the patient feels comfortable, she may then get up and about as usual. In many cases this is all the treatment which is necessary. With respect to Dr. Barnes's remarks as to the value of Simpson's galvanic stem, I believe, from experience, that all the good results attributed to the galvanic stem may be attained by the vulcanite stem. Dr. Barnes tells us that Simpson's stems are so much affected by the chemical action which is set up that they cannot be worn with comfort more than six weeks. On the other hand, the vulcanite stem may be worn for six months together without being in the least affected by chemical action."

Dr. Wynn Williams said, as the time was limited, he would confine his remarks to cases of anteflexion of the uterus. Those cases he treated by the introduction of a light vulcanite stem supported on the shield previously exhibited. In cases where the flexion was not very severe, all that was required was to introduce the stem and fix the shield. In the more severe cases he found it necessary to adopt the plan recommended by Dr. Barnes of dividing either side of the neck and cervix, not, however, to

any great extent. This enabled him to draw down the posterior lip and introduce the stem with much greater facility. In all cases the sound was first introduced, the position of the uterus rectified by it, and on its withdrawal, before the uterus had time to return to its abnormal position, the stem was quickly introduced. Where there is much difficulty in introducing the stem, its introduction will be considerably facilitated by warming *the extreme end* of the vulcanite stem, and giving it the curve of the flexed uterus. Where any complication exists, such as metritis, old adhesions, and the like, or where the uterus is not easily placed in its normal position, great care must be taken, and the precautions so forcibly insisted upon by his friend and colleague Dr. Routh in the paper must be carried out, the diseased condition should be remedied by rest, abstraction of blood, &c. Again, should there be any mischief in the neighbouring parts, as the rectum, &c., this also must be attended to. Lastly, should the introduction or retention of the stem set up any undue amount of irritation, it should be at once removed. The patient in all cases should be confined to the recumbent position for several days, until the uterus has become accustomed to the presence of the strange body.

Dr. Edis thought that the general tenor of the remarks made by the several Fellows who had spoken, as well as the statement of the author of the paper, was too much in favour of the employment of intra-uterine stems. Their advantages had been magnified, and their dangers diminished. He (Dr. Edis) considered their employment attended by much risk, not only to health, but also to life. He had seen several cases of severe peritonitis, pelvic cellulitis, hæmatocele, and pelvic abscess (with death from its rupture into the peritoneum) resulting from their employment. Dr. Thomas, of New York, in his recent edition of 'The Diseases of Women,' states that "The instrument known as the intra-uterine, or stem, pessary, unquestionably counteracts directly and immediately both versions and flexions; but it has been found to cause peritonitis and death in a number of instances, and in consequence it has been almost entirely abandoned. In this city I am led to believe that it is very rarely employed, from the fact that I never hear it mentioned as a resource, and that at a recent discussion upon displacements in the Obstetrical Society, it was never once alluded to." He also states that "although I have occasionally employed them, I place no reliance upon and avoid them whenever it is possible, on account of the dangers which attend upon their use." He (Dr. Edis) employed them in his practice, but only with extreme caution, and after suitable preparatory treatment as advocated by Dr. Routh.

Dr. Tilt, while approving the treatment recommended by Dr. Routh, regretted that he had not mentioned to what extent he

considered it necessary in the disease under consideration. He (Dr. Tilt) admitted the virtue of tents and of stem-pessaries in mechanical dysmenorrhœa, but only found it necessary to use them in a limited nnmber of cases, whereas, he opined, that a stranger, listening to the author's paper and to the remarks of the speakers, would conclude that the diseases under consideration should be generally treated by tents and stem-pessaries, the only divergence of opinion being whether these instruments should be introduced at once, or after curing the morbid conditions of the womb. He found that the author's preliminary treatment was usually sufficient to cure the patient, and he deprecated the use of stem-pessaries till at least three months after the application of potassa fusa, as it often took that time to get the full benefit of this application. He was surprised that no speaker, except Dr. Edis, had taken into account the serious consequences that occasionally followed the use of stem-pessaries. He was old enough to remember the introduction of most of the fifty stem-pessaries that had been passed round the room; every succeeding inventor invariably owned that those in previous use inflamed and cut into the womb, or caused metrorrhagia, while claiming for his own instrument an immunity from such accidents, the fact being that all not unfrequently caused or augmented uterine or peri-uterine inflammation.

Dr. Routh, in reply to Dr. Aveling, said that he had purposely avoided entering into details of history, as they would have unduly lengthened an already long paper. In reply to Dr. Barnes, he was much gratified in finding so careful an observer as Dr. Barnes so completely confirming all he (Dr. Routh) had said. In regard to some of the other gentlemen who had spoken, he could only pit, as it were, Dr. Heywood Smith and Dr. Edis, who also so fully concurred with him as to the great importance of the preliminary measures, against Drs. Chambers and Wynn Williams, who thought these unnecessary. He had no doubt that the two former, like himself, would be found in the long run the more prudent practitioners. To Dr. Murray and Dr. Squire, he could only say that if preliminary treatment cured the cases, he was certainly not so stubborn as not to stop there and be satisfied; and would never think of applying then the intra-uterine stem. This same observation was, in fact, a reply to the President, Dr. Tilt. He (Dr. Routh) did not use the stem in every case; but in the four classes of examples mentioned in the paper it could be seen that they were precisely those cases where either he or others had employed ordinary measures and failed; such, therefore, justified the use of stronger measures. Lastly, in reply to Dr. Squarey, in a case of flexion with ovaritis, he should treat both diseases synchronously, but he could not conclude, from his own experience, that the flexion could be cured by a simple elastic stem. It might be well not to meddle with the flexion, or,

at most, use only the elastic stem till the ovaritis was cured; but then in most examples the flexion would be found still uncured, and would require a Hodge's pessary or an internal stem.

INDEX.

PAGE

Accoucheurs, qualified, necessity for laws to secure the attendance of, female as well as male, in the labours of wives of the labouring classes and the poor (Mr. J. T. Mitchell) . . . 3
Address of the President, J. Braxton Hicks, M.D., F.R.S., Jan., 1873 16
Address (Inaugural) of the President, Edward John Tilt, M.D., February 5th, 1873 30
Annual General Meeting, January 1st, 1873 . . . 1
Aran, 'Sur les Maladies de l'Uterus et de ses annexes' (notice of) . 91
Armstrong (Alfred) of Norwood, obituary notice . . 20
Aveling (Dr. J. H.) on the best mode of opening the vein in transfusion 164
—— instrument called a "loop saw," to replace the écraseur in some cases (exhibited) 221
—— *Remarks* on the obstetric fillet or loop and objections to its use as an unscientific instrument 178

Bantock (Dr. G. G.) on the pathology of certain so-called unilocular ovarian cysts 105
—— *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage 71
Barnes (Dr. R.) specimen of dermoid cyst . . . 35
—— specimens of procidentia uteri and inversion of vagina (exhibited) 124
—— *Remarks* on ovaritis, as secondary to uterine displacements. 214
—— *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage 78
—— *Reply* to Dr. M. Duncan relative to the separate cavity of the uterine cervix and its non-connection with gestation . . 202
—— *Resolution* of regret on the death of Dr. Tyler Smith, moved by 160
Beach (Mr. Fletcher) uterus and ovaries of a child aged seven who had died of tubercular meningitis (exhibited) . . 57

PAGE

Beatty (Thomas Edward) obituary memoir . . . 17
Beck (Dr. Snow) *Report* on the cyst in Mr. Scott's case of extra-uterine fœtation 143
—— *Remarks* on the prospect of the Royal College of Surgeons examining and granting certificates to midwives . . 8
—— *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage . . . 65—71
—— his experience of cases of death from injection of perchloride of iron in post-partum hæmorrhage 77
Bedbath of tin, made by Maddox (Dr. H. Smith) . . 164
Bedpan (earthenware) to allow of free ablution (Dr. Squire) . 163
Bennet (Dr. Henry) his re-election as a Fellow referred to by the President 161
Bird (Dr. Fred.) plan for removing intra-uterine tumours (see Tapson) 247
Bladder, case of extroversion of, and other malformations (Dr. C. Rose) 125
Bones, pubic, necrosis of, following delivery (Dr. Playfair) . 219
Braun (Carl) of Vienna, instruments of: blunt-pointed hook, crooked trephine, and cranioclast 58
Breast supporter, linen (Dr. Squire) 163
Brown (Samuel W.) of Lewisham, obituary notice . . 19
Brunton (Dr.) *Remarks* on Dr. G. Roper's case of hypertrophic elongation of cervix uteri 170

Cæsarean section, case of (Dr. R. P. Harris) . . . 166
Cephalotripsy, case of (Dr. J. B. Hicks) . . . 41
Cervix uteri, see *Uterus*.
Chambers (Dr.) *Remarks* on Dr. Routh's paper on intra-uterine stems 276
Charter (Royal) remarks on the question of obtaining one for the Society 33
Chereau, 'Sur les Maladies des Ovaires' (notice of) . . 89
Cleveland (Dr.) *Remarks* on Mr. Mitchell's paper on qualified midwives 8
—— objections to the general use of a crusher for dividing the funis 86
—— *Remarks* on the question of the frequency of ovaritis . . 104
—— —— on the constitutional and local treatment of skin disease 242
Coates (Mr. N.) case of prolapsus uteri, in which the neck of the uterus was partially severed by a ligature of hair accumulated around it 9

PAGE
Cocker (John) of Blackpool, obituary notice . . . 20
Committees, Reports of the Puerperal-Temperature and Pelvis Committees 14
——— notices of their labours, and necessity for assistance to them from the body of the Fellows 20,21
Constrictor, new, for the removal of tumours of the uterus (Prof. Lazarewitch) 63
Convulsions (puerperal) in the ninth month of pregnancy, delivery with parallel forceps, child stillborn, recovery (Prof. Lazarewitch) 59
Cyst, dermoid, specimen of (Dr. Barnes) . . . 35
Cysts, see *Ovarian* cysts.

Delivery by forceps, in face presentations (Dr. B. Hicks) . . 39
—— of fœtus with the parallel forceps in a case of puerperal convulsions (Prof. Lazarewitch) 59
Divers (Dr. E.) chemical examination of the contents of an unilocular ovarian cyst 118
Duncan (Matthews) 'On perimetritis and parametritis' (notice of) . 96
—— on the spontaneous separation of the placenta when it is prævia 189

Eardley, see *Wilmot* (Eardley).
Easson (Jas.) of Stoke Pogis, obituary notice . . . 19
Ecraseur, with two stages for fastening the end of the wire (Dr. Routh) 38
—— single wire, improvement in, for large uterine fibroids (Dr. H. Smith) 86
Eczema, and its treatment 232
Edis (Dr.) *Remarks* on the improved education of midwives . 8
—— *relation* of a case favorable to the use of perchloride of iron in post-partum hæmorrhage 76
—— *Remarks* on Dr. Tilt's paper, on the progress of pelvic pathology 103
—— —— on Dr. Bantock's opinion that all unilocular cysts are originally multilocular 119
—— —— on the non-reliability of subjective symptoms in supposed extra-uterine pregnancy 156
—— —— on Dr. Mac Callum's cases of extra-uterine fœtation . 251
—— —— on the dangers attending the use of intra-uterine stems 278

PAGE

Election of New Fellows . 1, 29, 57, 85, 123, 159, 161, 185, 217, 245
Election of Corresponding Fellows [Dr. E. Martin] . . 123
Empyema, apparatus for use in cases of, in children (Dr. B. Woodman) 2
Erythema and its treatment 230

FARR (Mr. Archer) case of spontaneous salivation associated with pregnancy 222
Fellows, see *Election, List.*
—— (corresponding) formation of a new order of . . 15
Fillet or loop (the) as an obstetric aid, new modification of (Dr. Eardley Wilmot 172
Fistula, vesico-vaginal and recto-vaginal, case of (Mr. T. E. Jones) . 185
Fœtation, extra-uterine, see *Pregnancy* (extra-uterine).
Forceps, delivery by, in face presentation (Dr. B. Hicks) . . 39
Funis, artificial crusher for dividing the funis without tying it (Dr. H. Smith) 86

Gastrotomy successfully performed in a case of extra-uterine pregnancy (Mr. W. R. Jordan) 130
—— for supposed case of extra-uterine pregnancy (Dr. Meadows) . 145
Generation, organs of, see *Malformation of.*
GERVIS (Dr.) *Remarks* on primary and secondary ovaritis . . 215
Gestation, see *Pregnancy.*

Hæmorrhage, uterine post-partum, treatment by the intra-uterine injection of the perchloride of iron (Dr. Heywood Smith) . 44
—— *Discussion* of the question, and adjourned ditto . 50, 65
Hair, ligature of, accumulated around and partially severing the neck of the uterus, in a case of prolapsus (Mr. N. Coates) . . 9
HARRIS (Dr. W. H.) large fibrous tumour believed at the operation to be ovarian (exhibited) 58
—— *Remarks* on Dr. Edmonstoune Charles' instrument called the Calcutta craniotrix 42
HARRIS (Dr. R. P.) case of Cæsarean section . . . 166
Heart, fœtal, muscular susurrus in relation to the sounds of (Dr. B. Hicks) 187
Hernia, diaphragmatic, fœtus with (Dr. H. Smith) . . 162
HEWITT (Dr. Graily) *Remarks* on the injection of perchloride of iron in post-partum hæmorrhage 51
—— *Remarks* on Dr. Harris's specimen of fibroid tumour of uterus . 58

PAGE

HICKS (Dr. J. Braxton) case of delivery by the forceps in face presentation in the mento-lateral position . . . 39
—— Case of cephalotripsy, with short remarks . . . 41
—— *Discussion* on ditto 42
—— Note on the muscular susurrus in relation to the fœtal heart sounds 187
—— *Remarks* in favour of the injection of perchloride of iron in post-partum hæmorrhage 51
HOLMAN (Dr.) *Remarks* in favour of the use of perchloride of iron in post-partum hæmorrhage 76
Hypertrophic elongation of cervix uteri (Dr. G. Roper) . . 167

Impetigo, and its treatment 240
Instruments, obstetric, on the earlier use of in parturition, in recent years 24
—— —— blunt-pointed hook, crooked trephine, and cranioclast of Carl Braun 58
Intertrigo and its treatment 231
Iron, perchloride of, treatment of post-partum hæmorrhage by the intra-uterine injection of (Dr. Heywood Smith) . . 44
—— *Discussion of the question, speakers:* Dr. Routh, Dr. Gr. Hewitt, Dr. G. C. P. Murray, Dr. B. Hicks, Dr. Sell, Dr. Playfair, and Dr. Phillips . . . . . 50—3
—— *adjourned discussion, speakers:* Dr. Snow Beck, Dr. Heywood Smith, Dr. Bantock, Dr. Wynn Williams, Dr. Protheroe Smith, Dr. Holman, Dr. Edis, Dr. Rogers, Dr. Playfair, Dr. Barnes, Dr. Savage, and Dr. Heywood Smith . . . 65—83

JONES (Mr. T. Eyton) case of vesico-vaginal and recto-vaginal fistula 185
JORDAN (Mr. Ross) fœtus and placenta from a case of extra-uterine fœtation (exhibited) 124
—— case of extra-uterine pregnancy, gastrotomy successfully performed 130

Labour, instructions to women midwives in abnormal cases of, and in natural labour 6, 7
—— see *Parturition.*
Labours of the poor, necessity for laws to secure the attendance of qualified male or female accoucheurs in (Mr. J. T. Mitchell) . 3
LAZAREWITCH (Prof.) puerperal convulsions in the ninth month of pregnancy, accouchement forcé, expansion of the cervix with Barnes' dilators, delivery with parallel forceps, recovery . 59

PAGE

LAZAREWITCH (Prof.) new constrictor for the removal of tumours of the uterus 63
—— *presentation of gynæcological and obstetrical instruments from* . 217
Library of the Society, Report on its progress, 1872 . . 13
List of officers elected for 1873 11
—— *ditto for* 1874 v
—— *of Honorary Fellows* xi
—— *of Ordinary Fellows* xiv
—— *of deceased Fellows*, 1872 [with obituary notices, which see] 17—20
—— *of past Presidents* vi
—— *of Referees of Papers* vii
—— *of Standing Committees* . . . viii, ix
—— *of Honorary Local Secretaries* x
Loop, see *Fillet*.

MACCALLUM (Dr. D. C.) two cases of extra-uterine fœtation . 248
—— *Discussion* on ditto 251
Macrae (John) of Lewes, obituary notice . . . 20
MADGE (Dr.) *Resolution* of regret in the death of Dr. Tyler Smith, moved by 160
—— *Remarks* on the innocuous character of laceration of the cervix during labour 172
Malformation of the organs of generation in a child (Dr. C. Rose) . 82
—— ditto detailed *report* of examination of, by Dr. A. Rasch and Dr. Rose [extroversion of bladder, absence of rectum, and symphysis pubis, uterus in two lateral portions] . . 125
MEADOWS (Dr. Alf.) case of gastrotomy for supposed extra-uterine gestation 145
—— *Discussion* on ditto 155
Meeting, Annual General, Jan. 1, 1873 . . . 1
Meningitis, tubercular, uterus and ovaries of a child who had died of (Mr. F. Beach) 57
Midwives, qualified, necessity for laws to secure the attendance of, in the labours of wives of the poor (Mr. J. T. Mitchell) . 3
—— instructions to be given to women midwives regarding their duties in abnormal cases of labour and in simple natural labour . 6, 7
MITCHELL (J. T.) on the necessity for laws to secure for the wives of the labouring classes and the poor in their labours the attendance of qualified accoucheurs, female as well as male . . 3
—— *Discussion* on ditto 8
Monster, cyclopæan, description of (Mr. J. A. Thompson) . . 3
MURRAY (Dr. G. C. P.) *Remarks* in favour of the injection of perchloride of iron in post-partum hæmorrhage . . 51

PAGE
Muscles, ossification of, photographs shown by Dr. Sell . . 125

Necrosis of pubic bones following delivery (Dr Playfair) . . 219
Negrier on spontaneous ovulation (notice of) . . 88, 91

Obituary notices of Deceased Fellows:
Thomas Edward Beatty, M.D., of Dublin (Honorary) . 17
James Easson, M.R.C.S. (Slough) . . . 19
Samuel W. Brown, F.R.C.S. (Lewisham) . . 19
Lawrence Spencer, M.D. (Preston) . . . 19
John Cocker, M.D. (Blackpool) . . . 20
Alfred Armstrong, M.D. (Norwood) . . . 20
John Macrae, M.R.C.S. (Lewes) . . . 20
Obstetric progress during 1872, *résumé* of opinions gaining ground during late years [on zymotic poisons and use of instruments] . 22
Ovarian cysts, unilocular, on the pathology of certain so-called (Dr. Bantock) 105
—— unilocular, chemical examination of the contents of one by Dr. Divers 118
Ovarian pathology, on the progress of, during the last twenty-five years (Dr. E. J. Tilt) 87
—— nine propositions on the importance of ovaritis and morbid ovulation 92-103
Ovaries of a child who had died of tubercular meningitis . . 57
Ovariotomy, notice of recent advances in by Mr. Sp. Wells and Dr. S. Sköldberg 25
Ovaritis, subacute, on the diagnosis of (Dr. E. J. Tilt) . . 202

Parovarian cysts, characters by which distinguished from true ovarian cysts 117
Pelvic pathology, on the progress of, during the last twenty-five years (Dr. E. J. Tilt) 87
Pelvis, contraction of, conjugate diameter $2\frac{1}{2}$ inches, turning and extraction in pregnancy of right horn of a uterus bicornis (Dr. Snell). 180
Pelvis committee, *report of*. 14
Pessary, vulcanite stem, shield for supporting (Dr. W. Williams) . 246
Phillips (Dr. J. J.) *Remarks* on the improved education of midwives under the Royal Maternity Charity . . . 8
—— *Remarks* on Dr. Hicks' cephalotribe . . . 43
—— —— in favour of the injection of perchloride of iron, in severe cases of post-partum hæmorrhage . . . 53

PAGE

PHILLIPS (Dr. J. J.) *Remarks* on Dr. Harris's specimen of uterine myoma 58
—— —— on primary ovaritis as a cause of dysmenorrhœa . . 215
Placenta prævia, on the spontaneous separation of (Dr. M. Duncan) . 189
PLAYFAIR (Dr. W. S.) pessary for cases of anteflexion . . 124
—— specimen of malignant sarcoma from the right broad ligament . 217
—— specimen of necrosis of the pubic bones following delivery . 219
—— *Question* as to Dr. Snow Beck's experience of bad results from injection of perchloride of iron in post-partum hæmorrhage . 77
—— *Remarks* in favour of the injection of perchloride of iron in severe cases of post-partum hæmorrhage . . . 53
—— —— on Dr. G. Roper's case of hypertrophic elongation of the cervix uteri 170
—— —— on the obstetric fillet and objection to its use . . 179
Poisons, zymotic, question of preventing their introduction into the system during an operation or parturition . . . 23
Pregnancy of right horn in a uterus bicornis . . . 180
—— spontaneous salivation associated with (Mr. A. Farr) . 222
—— extra-uterine, note on the diagnosis of (Mr. L. Tait) . 135
—— —— two cases of (Dr. MacCallum) . . . 248
—— —— case of, with operation (Mr. J. Scott) . . 140
—— —— gastrotomy successfully performed (Mr. W. R. Jordan) . 130
—— —— case of gastrotomy for supposed (Dr. Meadows) . 145
—— —— cyst from (Mr. Scott) 124
—— —— fœtus and placenta from (Mr. Jordan) . . 124
Presentation, face, in the mento-lateral position, delivery by forceps in (Dr. B. Hicks) 39

RASCH (Dr. A.) *detailed report* on Dr. C. Rose's case of malformation of the genital organs 125
Receipts and Expenditure of the Society . . . 12
Rectum, absence of the colon opening through wall of ectopic bladder 125
Report of the Auditors for 1872 12
Report of the Hon. Librarian 12
Reports of the Puerperal Temperature and Pelvis Committees . 14
Ringworm and its treatment 227
ROGERS (Dr.) *Remarks* in favour of the use of perchloride of iron in post-partum hæmorrhage 77
ROPER (Dr. Geo.) case of hypertrophic elongation of the cervix uteri at the full term of pregnancy 167
—— *Discussion* on ditto 170

PAGE

Rose (Dr. Cooper) child with malformation of the genital organs (referred to Committee) 85
—— —— *detailed report* on by Dr. Rasch and Dr. C. Rose . 125
Routh (Dr. C. H. F.) écraseur, with two stages for fastening the ends of the wire 38
—— on the use of intra-uterine stems in uterine disease . . 252
—— *Discussion* on ditto 276
—— *Remarks* on the injection of perchloride of iron in post-partum hæmorrhage 50

Salivation, spontaneous, associated with pregnancy (Mr. A. Farr) . 222
Sarcoma (malignant) from right broad ligament (Dr. Playfair) . 217
Savage (Dr. H.) *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage . . 80
Savage (Dr. T.) *Remarks* in favour of Dr. Aveling's syringe in transfusion 165
" Saw (loop)" to replace the écraseur in some cases (Dr. Aveling) . 221
Scabies and its treatment 224
Scott (Mr. John) cyst from extra-uterine fœtation (exhibited) . 124
—— case of extra-uterine fœtation, with operation . . 140
—— —— *Report* on the cyst, by Dr. Snow Beck . . 143
—— *Remarks* on diagnostic signs of extra-uterine fœtation . 157
—— —— on Dr. MacCallum's case of extra-uterine fœtation . 251
Sell (Dr. E. H. M.) *of New York*, case of complete uterus bicornis, pregnancy of right horn, turning and extraction on account of pelvic contraction (conjugate diameter 2½ inches) . 180
—— instruments of Prof. Carl Braun, of Vienna, blunt-pointed hook, crooked trephine, and cranioclast (exhibited) . . 58
—— *Remarks* on the Vienna Hospital experience in favour of the injection of perchloride of iron in post-partum hæmorrhage . 52
—— photographs of ossification of muscles (shown) . . 125
Seymour on ovarian pathology (notice of) . . . 88
Shield for supporting a stem pessary in anteflexions of uterus (Dr. W. Williams) 246
Skin diseases, on the common, of children, parasitic and inflammatory (Dr. Wiltshire) 223
Sköldberg (Dr. Sven) of Stockholm, notice of his success in ovariotomy 25
Smith (Dr. Heywood) case illustrating the treatment of post-partum hæmorrhage, by the intra-uterine injection of the perchloride of iron 44
—— *Discussion* on ditto, and adjourned discussion . 50, 65

PAGE

SMITH (Dr. Heywood) improvement in the single wire écraseur for large uterine fibroids, &c.. 86
—— artificial crusher for dividing the funis without tying it (exhibited) 86
—— fœtus with a diaphragmatic hernia (exhibited) . . 162
—— notice of Maddox's tin bed-bath 164
—— *Reply* in the discussion on the use of perchloride of iron in post-partum hæmorrhage 82
—— *Remarks* on a means of diagnosis of extra-uterine pregnancy . 157
—— —— on Mr. Jones's case of vesico-vaginal and recto-vaginal fistula 187
—— —— on the use of the double touch in diagnosis of pelvic swellings and on ovaritis as a primary disorder . . 215
—— —— on Dr. Routh's paper on intra-uterine stems . . 276
SMITH (Dr. Protheroe) pneumatic india-rubber tube for facilitating the introduction of cylindrical specula . . . 165
—— *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage 75
—— —— on proper cases for the incision of the cervix uteri, when an obstacle to the progress of labour . . . 171
SMITH (Dr. Tyler) *Resolution of regret and sympathy on the death of* . 159
Specula, cylindrical, pneumatic india-rubber tube for facilitating the introduction of (Dr. P. Smith) . . . 165
Spencer (Lawrence) of Preston, obituary notice . . . 19
SQUAREY (Dr.) exhibition of flexible stem for cure of flexions of uterus 221
SQUIRE (Dr.) earthenware bedpan to allow of free ablution, and linen breast-supporter 163
—— *Remarks* on Dr. Routh's paper on intra-uterine stems . 276
Stem, flexible, for cure of flexions of uterus (Dr. Squarey) . . 221
Stems, intra-uterine, on their use in uterine disease (Dr. Routh) . 252
Susurrus, muscular, in relation to the fœtal heart sounds (Dr. B. Hicks) 187
Symphysis pubis, absence of 125

TAIT (Mr. Lawson) note on the diagnosis of extra-uterine pregnancy 135
—— *Remarks* on means of diagnosing the two varieties of extra-uterine gestation 156
TAPSON (Mr. Jos. A.) note on the removal of intra-uterine tumours . 247
Temperature (puerperal) committee, *report of* . . . 14
THOMPSON (Mr. J. A.) description of a cyclopean monster [a model in the museum of the Society] 35

PAGE

TILT (Dr. E. J.) on the progress of pelvic pathology during the last twenty-five years 87
—— *Discussion* on ditto 103
—— *Reference to the death of Dr. Tyler Smith* . . . 159
—— on the diagnosis of subacute ovaritis . . . 202
—— *Discussion* on ditto 214
—— *Remarks* on the rarity of primiparous extra-uterine pregnancy . 155
—— —— on Dr. G. Rogers' case of hypertrophic elongation of cervix uteri 170
—— —— on Dr. Routh's paper on intra-uterine stems . . 278
—— "on ovarian inflammation," 1850 (notice of) . . 89
'Transactions,' suggestions for improvements in the, by the introduction of more cases, and papers relative to diseases of children, &c. 31-33
Transfusion, best mode of opening the vein in (Dr. Aveling) . 164
Tumours of the uterus, new constrictor for the removal of (Prof. Lazarewitch) 63
—— intra-uterine, note on the removal of (Mr. J. A. Tapson) . 247

Uterus of a child who had died of tubercular meningitis . . 57
—— development of, in two lateral portions . . . 125
—— diseases of; on the use of intra-uterine stems in (Dr. Routh) . 252
—— flexions of, flexible stems for cure of (Dr. Squarey) . . 221
—— anteflexion of, pessary for (Dr. Playfair) . . . 124
—— —— shield for supporting a vulcanite stem pessary in (Dr. W. Williams) 246
—— procidentia of, specimen exhibited (Dr. Barnes) . . 124
—— prolapsus of, in which the neck was partially severed by a ligature of hair accumulated around it (Mr. N. Coates) . 9
—— tumours of, new constrictor for the removal of (Prof. Lazarewitch) 63
—— —— see *Tumours* (intra-uterine).
Uterus bicornis, case of complete, with pregnancy of right horn, turning and extraction on account of pelvic contraction (Dr. Sell) . 180
Uterus, cervix of, expansion of, with Barnes' dilators and incisions in delivery in a case of puerperal convulsions, &c. (Prof. Lazarewitch) 59
—— —— case of hypertrophic elongation of, at the full term of pregnancy (Dr. G. Roper) 167

Vagina, inversion of, specimen exhibited (Dr. Barnes) . . 124

WELLS (Mr. Spencer) *Remarks* on a case of twin pregnancy, one intra- and one extra-uterine 156

PAGE

West (Dr.) opinions on ovarian inflammation (notice of) . . 90

Westmacott (Dr.) *Remarks* on Dr. Eardley Wilmot's modification of the fillet or loop as an obstetric aid, with account of his own alterations and experience in its use . . . 178

Williams (Dr. Wynn) shield for supporting a vulcanite stem pessary in the treatment of anteflexions of the uterus (exhibited) . 246

—— *Remarks* in the discussion on the use of perchloride of iron in post-partum hæmorrhage 73

—— —— on ovaritis as secondary to uterine ailments . . 214

—— —— on Dr. Routh's paper on intra-uterine stems (in cases of anteflexion) 277

Wilmot (Dr. R. Eardley) on the fillet or loop as an obstetric aid, with especial reference to a new modification of the instrument . 172

—— *Discussion* on ditto 178

—— *Reply* in discussion on the uses of the obstetric fillet . . 179

Wiltshire (Dr. A.) on the common skin diseases of children . 223

Woodman (Dr. B.) two forms of apparatus for use in cases of empyema in children 2

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